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Original Articles.

THE TREATMENT OF GASTRIC HYPERACIDITY AND HYPERSECRESSION.

BY WILLIAM F. BOOS, M.D., BOSTON.

HYPERCHLORHYDRIA GASTRICA, or gastric hyperacidity, is very often seen in practice. As a primary condition it is apt to follow the excessive use of tobacco and the drinking of too many cocktails or highballs or sweet, soft drinks; it is also induced by overeating, the bolting of food and errors in diet. These causes are all sufficiently obvious not to need comment, except, perhaps, the last one; this, I think, deserves special consideration because it is remarkable how errors in diet, which in themselves are not flagrant, often cause gastric disturbances in many people who are otherwise well, and who are moderate in their habits, but whom experience has taught to avoid certain food articles which invariably cause trouble. The "forbidden" foods usually include the things commonly accepted as being difficultly digestible, such as fresh bread, griddle cakes, baked beans, mackerel, bluefish, roast or boiled pork, steamed puddings, sweets and fatty, fried or acid foods; but at times fairly innocuous substances distress susceptible persons, and it is not surprising if they imagine their digestive difficulties to be due to some gastric disorder for which they consult a physician. Patients of this kind are quite common; they belong, as a rule, to the professional classes, with mental rather than physi-

cal occupations, and their intolerance is due largely to their mode of life, which does not provide a sufficient amount of exercise and relaxation to encourage normal digestion. Besides this, some of the other causes mentioned may, of course, be doing their part to produce the patient's hyperacidity. In the study of each case careful questioning will usually reveal the source of trouble, and this, if possible, must be removed.

The causes of hyperacidity which I have mentioned above are, so to speak, external, and all the patients really require is a sensible regimen. They should be told, above all, that their intolerance is functional, and not the result of disease, that it is simply a warning of improper living; and they must be taught how, when and what to eat, when and how to exercise, when and how to rest and play. The use of tobacco or alcohol should be either prohibited or else greatly restricted. If the food intolerance becomes very pronounced, medical treatment is necessary.

In another and a very important class of cases the hyperacidity is merely a part-picture of a general neurosis. The cases of this character are decidedly on the increase, particularly here in America, where the restless striving and the keen competition of business and professional life are making ever greater and greater demands on the nervous reserve of the individual. The gastric symptoms of these cases are the expression of a disturbance in the enervation of the gastric glands, which usually takes the form of a hyperstimulation. As a result of excessive stimulation the gastric glands are caused either to secrete pepsin-hydrochloric acid in considerably

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greater quantities than is necessary for gastric digestion, or there is produced a flow of gastric juice for longer periods of time than is normally desirable. The latter condition constitutes what is known as hypersecretion, and patients who are afflicted with it show, at times, an almost continuous flow of gastric juice, the acidity of which may or may not be above the normal. In many cases, however, hypersecretion and hyperacidity go hand in hand.

A third moment which frequently complicates gastric neuroses is an increase of gastric motility, which causes the stomach to be emptied several hours before the norm. A typical case of hypermotility in which the other two conditions are also present is shown in the accompanying x-ray plates. The patient's history follows:

CASE 1. W. S. Y., male, 44, married, lawyer. For several years the patient has had gastric symptoms, which are getting worse. He now has heartburn, a sensation of fullness in the epigastrium and eructations of gas occurring about forty minutes after meals and lasting $\frac{3}{4}$ of an hour to 1 hour. The same train of symptoms reappears 3 to $3\frac{1}{2}$ hours p.c., this time with acute pain in the epigastrium. Without medicine his symptoms usually last till the next meal. Bicarbonate of soda gives relief for a short time only, therefore the patient has to take it repeatedly. The gastric pain often keeps him from sleeping at night, and he is apt to awake in the morning with headache and often with nausea. On physical examination, the lower border of the stomach was found to be three fingers' breadth above the umbilicus. There was no tenderness. The test breakfast was recovered 45 minutes p.c. The quantity was 25 cc.; the total acidity, $102\% = 372$ HCl. The capacity of the stomach was 900 cc. The x-ray after a bismuth meal shows high, small stomach, the emptying of which is immediate and rapid; the stomach is quite empty at the end of three hours. Plates of the average normal stomach, for control, show food present in the stomach at the end of six hours.

Depending on the character of the meal, the symptoms of hyperacidity appear in from 30 minutes to two hours after the ingestion of the meal. If the latter consisted chiefly of carbohydrates the symptoms come early while the ingestion of meat and fats retards their appearance. Heartburn, a feeling of fullness and of pressure in the epigastrium, eructations of gas, nausea, and distress, with or without pain, are very common. Some patients also feel "light-headed" or dizzy, others, again, complain of headache. Children with hyperacidity are very apt to have cankers in the mouth. As a rule the patients have trouble with the bowels, which are apt at one time to be too constipated and at another too loose.

An Ewald test breakfast will usually show increased acidity. If the test breakfast proves negative, it is well to give a test meal of one pint of milk and two rolls (Klemperer). This meal, which is recovered two hours later, shows definitely whether or not there is increased acid-

ity. In giving the Ewald breakfast the possibility of hypermotility should be borne in mind, it being my experience that in the average case of this kind the stomach empties itself in 75 minutes. For this reason I generally recover the test breakfast in 45 to 50 minutes instead of waiting an hour, as the textbooks advise.

In cases of hyperacidity the test meal shows good digestion, its acidity is increased, but there are no pathological elements present. The patient's stomach is usually normal in size, occasionally it is smaller than normal (x-ray case). Examination of the urine shows diminished chlorides.

The only abnormality to be found in the test meal, therefore, is the increased acidity, and even this is not apparent in every case with typical symptoms of hyperacidity.

If the patient is also subject to hypersecretion, his symptoms last much longer after the meal; they may, in fact, continue until food is again taken, when they subside temporarily. The symptoms also appear quite independently of meals; thus the patient may awake in the morning with a headache followed by gastric distress, nausea and the vomiting of considerable quantities of a clear fluid, which is so acid that it causes furring of the teeth. This train of symptoms may reappear at any time during the day when the stomach is empty or nearly so. If there is much retching, the vomitus finally contains bile. After vomiting, the patients feel much better, and this is usually the reason why they learn to induce vomiting, rather than to suffer their tortures for an hour or more.

In the presence of sufficient symptoms it is not difficult to make a diagnosis of hyperacidity or hypersecretion, but when the patient appears not to have any digestive disturbance in the ordinary sense, the source of his trouble is not so apparent. In these cases without direct gastric symptoms I find that certain reflexes are helpful in making the diagnosis; headache in the morning, dizziness an hour or two after eating or when the stomach is empty, and frequent pain in the back, are the more common of the gastric reflexes, and when the patient shows one of these, or all three, the possibility of hyperacidity or hypersecretion, or both, should suggest itself. The following cases are of this type:

CASE 2. C. L. H., female, 35, married 15 years, 3 children. Menses regular, digestion, according to patient, normal. No pyrosis or gastric distress, no vomiting, bowels fair. Patient complains of attacks of dizziness with, at times, syncope. Has fainted repeatedly in street, and once in subway station. Fainting spells occur a long time after eating. Patient has frequent "nervous headaches," particularly when she wakes in the morning. She has been told by a physician that she probably has heart trouble or hardening of the arteries. She has no palpitation or dyspnea on exertion. Physical examination negative. Blood pressure: syst., 130; diast., 92. Urine negative. Test breakfast recovered 50 minutes p.c. represents a colorless, slightly

opalescent liquid with finely divided bread. Quantity, 55 cc. No pathological constituents; acidity 87.2%, corresponding to 0.318% HCl.

CASE 3. W. J. C., female, 25, married 4 years, 2 children. After the second baby came, the patient had bad dizzy spell; since then she is dizzy much of the time, and she also complains of numb feeling in the hands; she feels very dizzy when she stoops. The bowels tend to looseness. There is no nausea, vomiting, heartburn, gastric distress or gas. Test breakfast: total acidity 91.5%, or 0.3342% HCl.

CASE 4. E. T. C., male, 29, single, salesman. Headaches for several months, dizziness much of the time; occasionally the dizziness is so bad that he falls in the store. No nausea, gas, heartburn, or other gastric symptoms, except a feeling of faintness in the epigastrium at 10 a.m., when the dizziness is also worst. Test breakfast shows total acidity 96%, or 0.351% HCl.

CASE 5. L. F. A., male, 59, single, lawyer. For one year strong tendency to headaches, usually aggravated by alcohol. Bowels loose with slight indiscretions in diet. Headaches in middle of morning and about 4-5 p.m. No vomiting, nausea, or gastric distress. Patient very nervous. Test breakfast shows total acidity 79.2%, or .288% HCl.

CASE 6. I. M. D., female, 38, single, bookkeeper. For some months "trembly" sensation in the epigastrum and pain in the back at 10-11 a.m. Her back feels as if it were scraped with some sharp instrument. No heartburn, etc. Total acidity 86.5%, or 0.315% HCl.

CASE 7. B. E., female, 11, school. Patient has had cankers for years, but of late they have been almost constantly present. She also suffers from frequent headaches, and very often when she is at school she feels a pain in the middle of the back. This pain appears at about 10 a.m. The child is attending a school where hard study is required. The physical examination showed several aphthae in the mouth, otherwise it was negative, except that the child is rather thin. I did not pass the tube in this case.

Normal gastric acidity ranges between .12% and .2%. All the patients who had the test breakfast, therefore, showed marked hyperacidity. The cases I have enumerated, including the canker case, were treated for hyperacidity and hypersecretion in the manner to be described later, and in all of them the symptoms disappeared entirely.

The study of gastric neuroses shows that the symptoms referable to hyperacidity and hypersecretion are progressive. Appearing at first once or twice a week only, they gradually become more and more frequent, until in time every meal is followed by its distressing sequelae, and the gastric symptoms finally dominate the picture to such an extent that they create the impression of a primary gastritis.

At this juncture the stomach trouble becomes an important cause of the patient's neurosis. We have here, as it were, a vicious circle: At first

there is a general neurasthenic condition, in which gastric symptoms gradually appear as the result of a neurogenic disturbance of gastric secretion. As these symptoms become more and more pronounced, they react upon the patient to make him more nervous, that is to say, to produce a neurosis of greater degree; the latter, then, in turn, increases the disturbance in gastric secretion.

It is obvious, I think, that the first step in the treatment of such cases is to remove, as far as possible, the symptom-complex arising from the stomach, thus eliminating what has become one of the causes, if not the chief cause, of the continued neurosis. When once the gastric symptoms have ceased to irritate the patient, the general neurosis will be amenable to rational therapy, such as suggestion, careful régime, rest, exercise, bromides, etc.

The dietary directions for hyperacidity and hypersecretion are the same whether the cause is external or neurogenic. The patient's food should be carefully indicated by a list. In order that his stomach is never quite empty, he should have five or six meals a day, instead of three. He must take sufficient time to eat his meals, and he should rest after each main meal. On account of the possibility of hypermotility, the food should contain plenty of butter, which retards the emptying of the stomach. To reduce the supply of hydrochloric acid forming material, his diet should be made as nearly salt-free as possible. Sweets stimulate the flow of HCl, therefore they should be prohibited. As regards the diet list, I find that my results are more satisfactory if I enumerate the things the patient may or may not have at each meal, rather than to indicate in a general way what he may eat and what he must avoid. The following is a sample.

DIETARY REGIMEN.

BREAKFAST (7.30 a.m.): Baked apple with cream; eggs, boiled, poached, on toast, shirred or scrambled; grilled bacon; steak or chop; Bensdorp's cocoa; occasionally one cup of coffee with much milk; buttered toast or crisp rolls.

10 a.m.: A glass of good, rich milk with bread and butter or zwieback.

LUNCHEON, 1 p.m.: Boiled rice or farina with cream or milk; a cup of custard or milk toast; crackers with milk; green vegetables with mashed or baked potatoes; macaroni cooked with cheese; spaghetti; broiled, creamed, baked or boiled fish (no mackerel, salmon or bluefish); occasionally cold meats; potatoes baked in their jackets with parmesan cheese; fish chowder; oyster stew. With any of these luncheon dishes, bread and butter or buttered toast. Daily, baked apple with cream; stewed prunes or apricots, apple sauce.

4 p.m. A glass of good, rich milk with bread and butter or zwieback.

DINNER, 6.30 p.m.: Oysters on the half shell, from November 1 to March 31, only; no clear soups, but cream and thick soups; chowders (except clam chowder). Fish: As at luncheon. Meat: Fowl, game, veal, beef (rare), steak (rare), lamb, very mild ham. The meats should be prepared in

simple style, without fancy sauces and without spices. They should be roasted, broiled, stewed, pot-roasted. Tender boiled beef and fowl are allowable. Vegetables: Young carrots, peas, beans, cauliflower, mashed turnip, asparagus tips, squash, summer squash, spinach in French style, lettuce, cooked like the spinach (very delicate), egg plant (not fried), oyster plant (not fried). Vegetables should be cooked with plenty of butter. When fresh vegetables are not available, the good brands of canned vegetables form a perfect substitute. Potatoes: Baked, boiled, au gratin, mashed, creamed, Delmonico. Macaroni, rice, spaghetti, noodles. Green salads with plenty of oil and little vinegar. Weak tea. Soft crackers and a little mild cheese. Puddings are allowed, except plum, suet, steamed or any other heavy puddings. Fruit and wine jellies are allowed; also ice cream, but you must eat this very slowly, melting it in the mouth. No pies, pastry or fritters.

9 p.m.: A glass of good, rich milk.

IN GENERAL: No raw or fried onions, no radishes, garlic, horse radish, ketchup, chutney. Worcestershire sauce, pickles, curry, olives, mustard. Avoid hot or fresh bread. Do not eat fried or salty food, but use just enough salt in your food to make it palatable, no more. Little or no sugar in your food. No candy. Rest for a half hour or longer after each main meal of the day, lying on your right side. Take regular exercise, such as walking, swimming, doubles in tennis, golf, horseback riding, bowling (in winter).

Eat slowly. Chew your food well. Go to bed early. Do not read novels at night. Stop worrying. Keep your bowels regular. Take a tepid sponge bath in the morning.

Milk is given between the meals, because the proteids in it absorb much pepsin-hydrochloric acid, while the butter fat delays emptying of the stomach. The use of some alkaline water at meals or immediately after is advisable in all cases, and French Vichy is good for this purpose. A glass of Vichy or simply of hot water on an empty stomach also helps to relieve the morning distress of hypersecretion by diluting the acid contents of the stomach.

This dietary regimen is suitable also for cases of gastric ulcer with hyperacidity, but ulcer patients must be warned to avoid, in addition, foods leaving a coarse residue, such as cabbage and most greens, as also raw fruit like apples, pears, pineapple, etc., and nuts and raisins.

As I have stated, many cases of hyperacidity, due merely to external causes, will gradually yield to the regimen alone, but improvement is, of course, more rapid if the patient receives medicines from the start. Hyperacidity of neurogenic origin always requires medicines.

In the medicinal treatment of hyperacidity, preparations containing proteolytic ferments, such as pepsin, papain, and pancreatin, have been much in vogue. The use of these ferments is, to my mind, however, quite irrational, since in cases of this kind the pepsin is already present in abnormal amount. The gastric juice of the patient with hyperacidity contains not simply excessive hydrochloric acid, but excessive pepsin-

hydrochloric acid; in other words, the pepsin is increased in the same measure as the hydrochloric acid, with the result that digestion is really more vigorous than in the normal individual. What these patients need is neutralization of the acid, with consequent relief from its irritant action on the gastric mucous membrane. Bicarbonate of soda gives this relief very promptly, but its neutralizing effect does not last long, since this salt, being soluble, is carried out of the stomach by peristalsis before the excessive acid formation has ceased. In order to obtain more lasting neutralization, it is necessary to use insoluble compounds, such as the carbonates of magnesia and lime, and the oxides of magnesium. These substances are precipitated among the rugae of the gastric mucous membrane, where they remain to neutralize the hydrochloric acid as it is formed. They are removed from the stomach only as they are converted into their soluble chlorides. I find that in nervous hyperacidity with tendency to loose bowels carbonate of lime develops a threefold action: it neutralizes the excess of acid, it stops the looseness of the bowels, and the absorption into the system of the calcium chloride which is formed in the stomach produces a distinct quieting effect on the patient's nervous condition.

In practice I have used for years a mixture of calcium carbonate and magnesium carbonate or oxide in form of a powder, the quantity of each depending on the state of the patient's bowels. This powder answers the purpose very well, but occasionally patients complain of the inconvenience of taking powders, particularly when they are away from home. With these patients I have recently used a preparation in tablet form which is said to contain similar compounds of the alkaline earths, and which was submitted to me for trial. I found that the tablets, which are known under the name of Pyrosan, act much the same as the powders. They also have a slight cathartic action when they are taken in quantity sufficient to relieve the gastric symptoms.

For hyperacidity, I have the patients take one powder t.i.d. from 30-50 minutes p.c. If their symptoms occur earlier, i.e., while they are still eating, or immediately after eating, I have them take a little bicarbonate of soda just before the meal. For the morning headache of hypersecretion I advise them to take another powder when they go to bed. In the following case I tried the tablets instead of the powder.

CASE 8. T. W. S., male, 51, single, engineer. The patient has been subject to headaches for many years, but they have been more frequent and more severe for the last six years, following his father's death. The patient now wakes at 5 A.M. with severe frontal headache. Sometimes the headache is unilateral, often it is so severe that the eyes ache and seem to bulge from the sockets; at times there is nausea with the headache. The bowels are very constipated, the appetite is fair. Tobacco, very little; alcohol, none. He has never been exposed

to venereal infection. For years he has taken three to four powders of phenacetine and salol daily for his headaches. The patient is very thin, otherwise physical examination is negative, except that the blood pressure is 182. The urine is negative.

Since the patient was obliged to leave the city for an extended trip on the same day, it was not possible for me to give him a test meal. From his symptoms I felt, however, that his morning headaches might be due to hypersecretion, and I therefore advised him to take two tablets three times a day after eating and two at bedtime, that is to say, eight tablets in all. On his return from the trip he told me that on the morning after he took two tablets at night he was free from headache for the first time in years. He is now taking the tablets as indicated, he does not have any headaches and his bowels move twice a day.

In view of the fact that cases of hyperacidity and hypersecretion without definite gastric symptoms, like the last case, are quite common, it is well to make the treatment of nervous patients such that these two conditions are provided for. This does away with the giving and analyzing of test meals, a practice which the busy doctor rarely has time to carry out.

By using the measures I have indicated, the stomach condition may be cured or greatly relieved. But relief from gastric distress is merely the first step in the treatment of neurogenic cases; the physician should go further, he should try to ascertain and to remove the original cause of the trouble. To do this he must analyze the underlying neurosis so that all the disturbing factors may be brought to light and dealt with separately; he should not follow the common practice, simply to prescribe bromides, and allow the patient to drift along with all the causes of his nervous collapse still active, when a little real interest may keep him from becoming a hopeless neurasthenic. In many cases, particularly where family and financial troubles are concerned, there is, of course, little to be done beyond giving the patient mental and moral encouragement and support; occasionally, however, we see a case like the following:

CASE 9. J. P. P., male, 22, single, salesman. For one year distress after meals, becoming more and more pronounced; $\frac{1}{2}$ to $\frac{3}{4}$ of an hour p.c. he has heartburn, eructations of gas, pressure and acute pain in the epigastrum, lasting one hour or more and returning several hours later. There is no vomiting. The patient is apt to awake with headache in the morning, and often his headache continues during the day. The epigastric pain is so intense that the family doctor made a diagnosis of peptic ulcer and advised operation. There has been no vomiting of blood and no tarry stool. There is no tenderness. Repeated examination of stool for occult blood, negative. X-ray, negative. Although the patient's pain was suggestive of Moynihan's hunger pain, I could not find any positive evidence of ulcer. I decided, however, not to pass the tube on account of the danger of ulcer, and I treated him as a case of hyperacidity with hypersecretion, also giving him bromides in con-

siderable amount for his greatly increased nervous reflexes. While he was under the influence of bromides he got along fairly well, but as soon as he tried to do without them or even appreciably to diminish the dosage, his nerve control again collapsed.

Inquiry into the condition of his employment gave me the following story: He was working for a large corporation, with whom he had been five years. Being ambitious, he worked hard and stayed overtime at the office nearly every day; during the last few years, however, one man after another, with apparently less ability, but with more influence than he had, was raised above him. Despite his disappointment, he worked harder than ever and, as is usual in such cases, he was exploited by his office chief who did nothing to improve his position.

In view of these facts, I told him that a change of occupation was about the only thing that would save him from becoming a nervous wreck. He was afraid to begin all over again, as he put it, but in the end he took my advice and sought a new position. This time he found employment with people who showed substantial appreciation of his ability and application. He has now been in his new place for about a year, and when I last saw him he was doing entirely without medicine and was free from all symptoms. I give this case in detail because it is typical of many.

In conclusion, I wish to say a few words about the importance of good reading as a therapeutic measure in nervous cases. Patients of this kind are, as a rule, constantly "on the go," seeking diversion in the company of friends, at the club, in the theatre and at the moving pictures; they seem, in other words, to be entirely dependent on outward stimuli for their entertainment and distraction. On inquiry one usually finds that outside of the daily papers, they read, at best, only the current novels. What these people need is more relaxation and better mental balance, and I think there is nothing like a good book to give them both; good reading brings out the resources within them and it develops mental stability and independence.

The best books for our purpose are biographies, autobiographies, and the memoirs of well-known men and women, also books of poetry, books of travel and exploration, historical novels, like those of Mühlbach and Ebers, and the plays of Molière, Shaw, Dunsany and others.

I give my nervous patients a list of books which I require them to read in sequence, and in order to make sure that they actually do their reading I ask them to tell me what they think of each book. In many instances the patients become good readers and the resulting effect on their nerve control is very gratifying. If they are unwilling or too impatient to make a beginning, it is a good plan to try reading aloud to them. This will often rouse their interest to such an extent that they continue to read on their own account. The attendance at concerts where classical music is offered is also a valuable help for nervous patients.

(Indebted to the Laboratory of Dr. Percy Brown.)

CASE I. W. S. Y.

The first four prints show a small, active, high-placed stomach, the antrum of which is placed so far to the right that it conceals the first portion of the duodenum, except in the lateral position. The first print, ten minutes post eartum, shows the opaque meal well down in the jejunum. The second print, twenty-five minutes post eartum, shows the opaque meal in the jejunum, the head of the food-column being well

toward the terminal ileum. The fifth print, three hours post eartum, shows the stomach to be entirely empty, the opaque meal scattered well through the ileum and jejunum, with the head of the food column already in the large intestine. The last print, six hours after the ingestion of the meal, shows the head of the food-column in the first portion of the descending colon, with only a small portion remaining in the small intestine.



FIG. I. A. 10 min. Prone.



FIG. III. A. 45 min. Erect.



FIG. II. A. 35 min. Prone.



FIG. V. A. 4 hours. Prone.



FIG. IV. A. 3 hours. Prone.

(Indebted to the Laboratory of Dr. Percy Brown.)

NORMAL STOMACH.

This is a somewhat large, rather low-placed, active stomach, normal for this type of individual. The pyloric region and first portion of the duodenum show well in about the ordinary position. Compare the head of the food column of the opaque meal, its distribution through the small intestine, and the gastric residue at the corresponding periods.



FIG. I. B. 10 min. Erect.



FIG. III. B. 35 min. Prone.



FIG. II. B. 25 min. Prone.

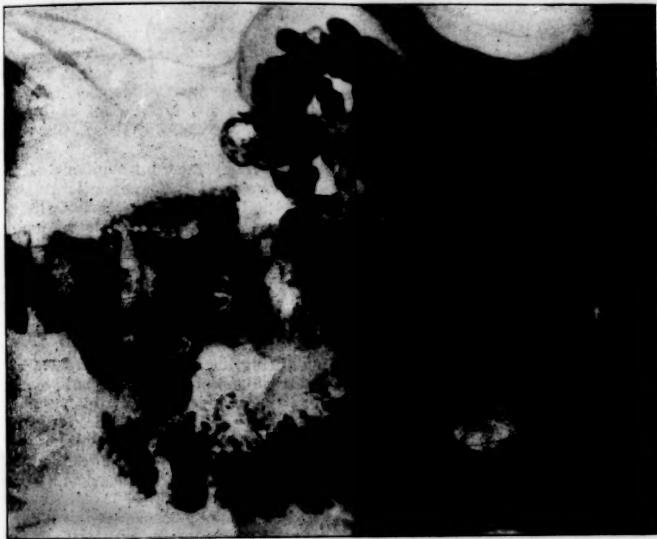


FIG. V. B. 6 hours. Prone.



FIG. IV. B. 8 hours. Prone.

THE CEREBROSPINAL FLUID IN AN-
TERIOR POLIOMYELITIS. REPORT
ON 108 CASES.*

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DURING the epidemic of anterior poliomyelitis last fall, about 150 cases of this disease were treated at the West Department (contagious) of the Massachusetts Homeopathic Hospital. Of these patients, the majority were subjected to lumbar puncture, and it is the results of the punctures (221 in all) which have furnished the material for the present paper.

All the patients here considered were admitted during the early postparalytic stage. The puncture was performed very shortly after the patient's entrance; many were repeated once or twice, nearly always on consecutive days. In short, we are dealing in this paper with poliomyelitis in the first week or ten days following the onset of the paralytic symptoms.

The following data were obtained on each fluid: pressure, color and appearance, number of cells per cu. mm. (using the Fuchs-Rosenthal chamber), with differential count; globulin content, using (when the amount of fluid permitted) the tests of Nonne and Apelt¹ (the so-called Phase I), Noguchi², and Pandy³. Ninety-four fluids were tested as to reducing power with Fehling's solution (equal parts of spinal fluid and Fehling's solution being brought to the boiling point together). The colloidal gold test of Lange⁴ was applied to 21 fluids. The Wassermann test was not performed⁵. Bloody fluids were not examined.

Pressure. The pressure was increased in 154 cases, or 69.7%, the degree of increase being as follows: Slight increase, 31.7%; moderate increase, 32.6%; marked increase, 5.4%. These findings correspond in general to those reported by others.^{6,7,8}

Appearance. Here, also, results were as expected.^{6,7,8} Only 26 fluids, or 11.7%, were more or less turbid, the rest being clear and colorless. Only one fluid presented fibrin clot formation.^{6,7,8}

Cells. In the very earliest stages of the disease (preparalytic), a transient polynucleosis may appear,^{9,10} although the frequency of this phenomenon is questioned.¹¹ It is generally agreed that immediately after the onset of paralysis, a pleocytosis is demonstrable, and that from 75% to 100% of these cells are lymphocytes. The number of cells varies, as many as 990 per cu. mm. having been reported¹², but the number, whatever it be, gradually falls, so that

at the end of the second week the cell count is almost always normal¹³. The cells per cu. mm. in this series were as follows: Under 10, 37.4%; 11 to 20, 22.5%; 21 to 50, 23.2%; 51 to 100, 10.3%; over 100, 6.4%. The highest count in this group—which does not include punctures made after intraspinal administration of serum—was 206. With but one or two exceptions, 50% or more of these cells were lymphocytes.

Following the intraspinal treatments,—whether normal or “immune” serum was used,—only 4 out of 56 examinations failed to show an increased cell count. In the majority of these counts, polymorphonuclear cells predominated¹⁴. The highest count in this group was 6500 per cu. mm.—an almost startling figure.

Globulin. It is now generally agreed^{9,10,11} that the globulin excess is comparatively slight in the earlier stages of the disease, gradually increasing during the second and third weeks, and then again subsiding until normality is regained. Whatever course the globulin excess may follow, it certainly is not, as a rule, large at first¹⁵. In the series now under consideration, only 14 fluids failed to give positive results with the globulin tests applied. In nearly all cases this excess was slight (\pm or +). The tests employed yielded fairly consonant results, Pandy's method³ giving a somewhat more marked reaction throughout. This latter statement is illustrated by the fact that, while by Nonne's¹ and Noguchi's², a marked globulin excess was demonstrated in only 1 case, Pandy's test indicated a similar condition in six; Pandy's test has the merit of simplicity and seems to fulfill the claim that it is more delicate than Nonne's. It is a question, indeed, whether it may not be so delicate as to lead to dubious results with normal fluids. In the author's hands, Noguchi's butyric acid test has proved most satisfactory. On account, however, of the very objectionable odor, which is an unavoidable accompaniment of this test, recourse will still probably be had largely to Nonne's method, which is both simple, reliable, and innocent of insult to the Schneiderian membrane.

The degree of globulin excess appears to bear no relation, in the present series at least, to the severity of the disease, the cell count and the pressure of the fluid, or the patient's temperature just before the removal of the fluid.

Fehling reduction. Authors^{8,9,10,11} unite in saying that Fehling's solution is reduced by poliomyelitis fluids in virtually every instance. It is probably only in the cases presenting extensive and severe pathological changes,¹² that this property is lost. The chief significance of this test is in the differential diagnosis of poliomyelitis and meningitis, as in the latter condition a negative result is much more frequent (though far from universal¹³). Of the 93 fluids in this series, examined as to reducing power, all gave a positive result, the reading being in most

* Read, in substance, before the Alethean Club, Boston, Feb. 9, 1917.

cases + or + + (complete reduction= + + + +).

Lange reaction. Recent studies^{14 15 16} have shown that the spinal fluid of patients suffering from poliomyelitis gives a fairly definite curve when the colloidal gold test is applied. The lower dilutions are reduced, the decolorization rarely, however, being complete. A typical curve in the acute stage¹⁵ is 1 1 2 3 3 3 1 0 0 0. In the later weeks no constant rule is followed¹⁶. The chief value of this test, as of the Fehling reaction, seems to be in aiding to distinguish between poliomyelitis and the meningitides.

Of the 21 Lange reactions here reported, 14, or 66%, follow the general rule laid down in the preceding paragraph. The other curves are so anomalous that some technical error (the nature of which is at present unknown) must be invoked to explain them. Protocols are omitted here, as their presence would not add materially to the value of the paper.

A few words as to the significance of spinal fluid examinations in poliomyelitis may not be amiss. Such physicians (and the number is growing) as place any value upon laboratory reports, tend to rely on them as pathognomonic, neglecting the clinical aspects of disease in so doing. Their diagnosis may be termed reflex; for them the laboratory, instead of being, at the most, a staff to lean upon, has become a sort of mental perambulator. Fortunately or unfortunately, medicine has not yet been reduced to a question of chemical reagents and hemolytic systems; on the other hand, the value of the laboratory to the clinician must not be minimized. The physician who spurns the laboratory is at fault; but he who makes or reads a laboratory report without taking the patient into consideration, commits an even greater error. In poliomyelitis, especially, does this hold true.^{6 17} As we have seen, there is nothing in the chemical or cytological examination of the spinal fluid which can be considered characteristic of this disease. Yet the clinical diagnosis is sometimes far from easy; in such obscure cases the laboratory can aid us in differentiating poliomyelitis from tuberculous or purulent meningitis or meningism. If, first of all, a careful history is taken and a thorough physical examination made, it will frequently be found that the best the laboratory can do is to verify the clinical diagnosis. When this fact is understood and practised, indiscriminate lumbar puncture may cease so to captivate the fancy. In conclusion, the author wishes here to express his thanks to Dr. Helmut Ulrich, Research Associate of the Evans Memorial, who performed the lumbar punctures and made the cytological examinations.

SUMMARY.

In the early postparalytic stage of anterior poliomyelitis, the spinal fluid usually shows a moderate lymphocytosis and a slight to moderate increase in pressure and in globulin content.

Fehling's solution is reduced, but this phenomenon is of little diagnostic value.

A reasonably constant curve is yielded by Lange's colloidal gold test; this curve has some value in the differential diagnosis.

The picture is only fairly constant, and in the absence of positive clinical findings does not justify a diagnosis.

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Massachusetts Society for Mental Hygiene.

DR. SAMUEL G. HOWE AND THE BEGINNING OF WORK FOR THE FEEBLE-MINDED IN MASSACHUSETTS.*

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BEFORE giving ourselves to the consideration of the papers which have been prepared for this Conference, it is fitting that we should stop for a few moments to pay tribute to the memory of the man who preceded us all in this work, the man who first aroused the interest of the people of Massachusetts in the problem of the feeble-minded, and who laid the foundation upon which we now build the superstructure—the Boston physician-philanthropist, Dr. Samuel G. Howe.

* Read before the Conference on Feeble-mindedness of the Massachusetts Society for Mental Hygiene, Ford Hall, Boston, Dec. 13, 1916.

For more than forty years, Dr. Howe was a leader in philanthropic movements in Boston. His office, at 50 Bromfield Street, was a center to which those engaged in the problems of the day came for counsel and advice, for renewal of courage and vision. It is not difficult to understand the reasons for his leadership. Many elements, no doubt, combined to create it—his earnestness, his unselfishness, his disinterestedness, his sagacity—but none was more effective than his pioneering spirit. His interests were wide—wider than the day's trail. Conventional philanthropies did not hold him. He was curious, venturesome, spirited. The unexplored, the tangled by-paths drew him. What others overlooked, he stopped to examine. Where others turned away, he plunged in.

Dr. Howe was graduated from Brown University in 1821, and from the Harvard Medical School in 1824. At the time of his graduation from the Medical School, the Greek Rebellion was in progress, and Dr. Howe threw in his lot with the Greek patriots and sailed from Boston to become a surgeon in the Greek cause, even as Boston physicians are today contributing their services to the war hospitals of Europe. He served Greece for six years in the capacity of surgeon, co-patriot and soldier when need required, and as organizer and dispenser of American relief. Samuel G. Howe was the Herbert C. Hoover of the Greek Rebellion.

The same love of freedom which had led him to Greece, later led him to Paris at the time of the July revolution, where, heedless of the danger to himself, and against the remonstrance of Lafayette who feared for his safety, he marched with the French leader through the streets of Paris when Lafayette took command of the revolt. He continued his journey to Brussels and took part in the "scrummage there," which later led to the independence of Belgium.

He returned to the United States in 1831. There was some talk of his taking charge of the negro colony of Liberia, but negotiations failed. He became interested in the project, then being discussed in Boston, for teaching the blind. There were at this time no schools for the blind in this country. He accepted the superintendency of the school about to be established and sailed for Europe to study the European schools and methods. While in Paris he was again called upon to serve in a larger capacity and was made chairman of the American-Polish Relief Committee. Lafayette urged upon him a visit to Prussian Poland, to carry money to the Polish refugees for clothing and food. It was a dangerous mission as the Prussian government was suspicious and unfriendly. He went. Alone in the interior of Prussia, surrounded by Prussian soldiers, his discretion is overcome by his emotion as a body of disheartened Polish prisoners march by, and he throws up his hat and cheers. Although he fulfilled his mission to the refugees, it is not sur-

prising to learn that he was greatly handicapped by the Prussian government and that on his return to Berlin he was thrown into prison where he remained *incommunicado* until, at the end of six weeks, he succeeded in smuggling news of his situation to the American minister.

Returning to America he opened the first school for the blind in this country—the Perkins Institute. The methods of printing for the blind then in vogue were so difficult and expensive as to preclude extensive use. His active mind was soon at work on the problem, and he devised a method which revolutionized such printing, and made possible libraries rather than books for the blind. His experiments in teaching were watched with interest and, once he had demonstrated the wisdom and practicability of teaching the blind, his school and methods were copied elsewhere. Thus a new world was opened to the blind of America. Dr. Howe's most famous pupil was the deaf, dumb and blind girl, Laura Bridgman. Dr. Howe remained superintendent of the school which he founded until his death.

He was keenly interested in the work for the insane, which was just beginning in Massachusetts, and with others was instrumental in establishing the first hospital for the public care of the insane in this state, and one of the first in the country—the Summer Street Hospital in Worcester. He was ever the champion of this new philanthropy.

A dispute having arisen between Horace Mann and others over the best method of teaching the deaf and dumb, Dr. Howe became interested in this new field. He took into his school two deaf-mute children and began a series of experiments which finally had a share in leading to the establishment, in the neighborhood of Boston, of a small school devoted to the articulate method of education—the first school of its kind in the country—and later to the founding of the Clarke School for the Deaf at Northampton.

Dr. Howe was chairman of the first State Board of Charity organized in this state and, as chairman of that first board, laid down principles which are observed today. Large charitable institutions he held to be an abomination and not to be tolerated except where absolutely necessary. He, therefore, advocated and developed—and the method is still being used successfully today—family care for certain types of the insane. And it is to him that we owe a principle of which Massachusetts is very proud—that orphaned children should not be congregated in large asylums, but that suitable homes should be found for them where they could be boarded, if necessary, at the expense of the state.

He was active in the anti-slavery movement, was chairman of the Boston-Kansas committee, and an adviser and friend of John Brown. And

finally, as we shall see, it was he who was instrumental in organizing the first school for the feeble-minded, not only in the State but in the country.

Dr. Howe's interest in the possibilities of teaching the idiotic came as a result of the success with which he had met in teaching in his school, certain blind, idiotic children. At this time there was no provision in this country for the care of the idiotic. Teaching them had never been considered. Europe had done little more, although there were some custodial institutions. Pauper idiots in this country were left largely to the mercy of the almshouse-keepers, and in the almshouses where they were not understood the helpless idiots were neglected and frequently grossly abused. Science had not yet interested itself in an attempt to understand these individuals. So far as anyone knew, idiots were merely a trial and a punishment sent by God. A popular notion prevailed that poulticing the head might be of help, and in cases where impressions were apparently not retained, cold poultices of oak bark were applied to the head to tan and harden the fibers. In cases which were hard to impress, hot or softening poultices of bread and milk were applied, or the skull was plastered with tar which was left on for varying periods of time. Tremendous doses of calomel were given in other cases, to "mend the brain," it being supposed that the mercury acted as a solder and "soldered up the openings."

As a member of the Legislature in 1846, Dr. Howe succeeded in having passed a bill creating a commission which was "to inquire into the condition of the idiots of the Commonwealth, to ascertain their number and whether anything can be done in their behalf." Dr. Howe was made chairman of this commission and wrote the report. A partial report was made in 1847; a full report in the winter of 1847-48. Considering the time, the almost complete lack of information in existence on the subject, the difficulties under which the work was done, and the fact that this was the first investigation of its kind ever made, these reports, in comprehension of scope, in information obtained and in spirit are nothing short of marvelous. Hopeless as the education of the idiot seemed to be, the reports were sufficiently convincing to induce the Legislature to appropriate \$2,500 a year for three years for the experimental teaching of ten idiotic children. These experiments were carried on by Dr. Howe at his school for the blind. At the end of three years the work was found to be so promising that the Legislature created a new school known as the Massachusetts School for Idiotic Children, and increased the annual appropriation to \$5,000 a year. Thus was established, through the efforts of Dr. Howe, the first school for the feeble-minded in the country. So genuine and so keen was Dr. Howe's interest in the work, and so

great his belief in it, that for over ten years he contributed his services to the State, and without salary served as superintendent of the new school.

Dr. Howe did not deceive himself, or try to deceive others, as to what might be accomplished in the training of idiots. His chief object was to arrest, in these individuals, deterioration and degradation. "Many die young," he said, "but those who grow to manhood, especially those in our almshouses, sink lower and lower in degradation as they advance in years. This, surely, should not be; if no one else will prevent it, the State should. They were born with capacities for improvement—let this not be extinguished; they were born idiots only—let them not die brutes!" He did not expect that the idiots would ever gain such acquaintance with the common branches of learning as would be of much ornament or direct use to them. "It is not expected that they will be raised to a level with ordinary persons or play an independent part in the world and take care of themselves, but it is hoped to train them up in cleanliness and decency, to prevent or root out vicious and debasing habits; to moderate their gluttonous appetites; and to lessen the strength of their animal natures generally by calling into activity the higher feelings and desire, and by substituting constant occupation for idleness. It is proposed to train all the senses and perceptive faculties by constant and varied exercise; to strengthen the power of attention; to teach, as much as possible, the rudiments of knowledge; to develop the muscular system; and to give some degree of dexterity in simple handicraft.

"Efforts will be made to call out their social affections, and to lessen their inordinate selfishness by awakening some feeling of regard for others, in return for kindness and love manifested toward them.

"The still harder task will be attempted of appealing to the moral sense, and drawing out what little capacity there may exist for comprehending right, for exercising conscience, and for developing the religious sentiment.

"It is hoped that part of them will gain some really useful knowledge; that most of them will become cleanly, decent, temperate, and industrious; and that all of them will be better and happier from the efforts made in their behalf."

In reading Dr. Howe's reports it is a constant surprise to learn how fully he grasped the situation. There is little in our modern work that he did not at least foresee or sense. He clearly differentiated between idiotic persons and demented persons, a distinction that was not generally made at the time. He recognized the difference between the retarded child and the idiotic child. He recognized the child with specialized defect. He recognized both quantitative and qualitative mental differences.

He recognized that there were, probably,

many causes which lead to idiocy, but he named as the three chief causes—heredity, alcohol and vice. He may have over-emphasized somewhat the influence of alcohol—but hardly today are we in a position to either correct him or approve him in this matter, and if for vice we read syphilis, his causes become modern.

As to heredity, he says: "Regarding it as a matter relating to the mere animal man, if a farmer had swine, cattle or horses as inferior to others of their kind, as many of these people are inferior to other men and women, he would pronounce them unfit to breed from; such persons are indeed unfit to continue the species, for while they multiply its numbers they lessen its aggregate powers. . . . This subject of the hereditary transmission of diseased tendency is of vast importance, but it is a difficult one to treat, because squeamish delicacy makes people avoid it; but if ever the race is to be relieved of a tithe of the body ills which flesh is now heir to, it must be by a clear understanding of and willing obedience to the laws which make the parents the blessing or the curse of the children; the givers of strength, and vigor and beauty, or the dispensers of debility, and disease, and deformity."

His clinical observations were accurate. He recognized the different types, and the varying social significance which the different types might have—the mild, affectionate and docile, and, on the other hand, those "who are helpless prey to dreadful passions, depraved appetites and disgusting propensities."

Aside from the terminology, his classification is modern. Binet tests or Yerkes tests were, of course, unknown in that day, but Dr. Howe devised a method of his own, based upon the ability of the child to use and understand some kind of language as signs of thought. His discussion of this method and its use fill one with admiration and respect for the man who, in that early day, could have devised it. One recognizes in it the elements of many of our modern psychological tests. We recognize the idiot, the imbecile and the moron. Dr. Howe termed them the idiot, the fool and the simpleton. Whether he was the first to suggest the term "feeble-minded," I do not know, but in his first report is this statement: "Evil may arise from the misuse of the term 'insane,' as the name of a class, if it causes them to be considered as a distinct order of persons and different from other men in being utterly devoid of mind, for it will be considered useless to try to teach those who have no minds at all; but if they are considered as differing from others not in kind, but in degree only—as merely having feeble minds—then their very feebleness, like that of little children, will commend them to our hearts." His educational methods are largely the methods of today, emphasis being laid upon sense training, neuromuscular control, dexterity, simple handicraft, open air, proper diet and exercise.

The institution, thus begun, grew and demonstrated its worth. Dr. Howe's great hope, expressed at the beginning, became true, "If the experiment should succeed, the good done to the ten individuals who are the subjects of it, compared to the good that must follow to others, will be as the grain of mustard seed, to the goodly tree in whose branches the fowls of the air find rest. The capacity of idiots for development once shown, Massachusetts will gather them from the almshouses and the by-places and give them careful nurture and instruction; and when Massachusetts shall show to her sister states these redeemed ones, snatched from the slough of brutishness, and made tidy, and decent, and industrious, and happy—then this example of true and practical Christianity will be followed by others; and thousands who are now groveling in filth and depravity, and wretchedness, the pariahs of civilization, will be brought back to the bosom of society and treated with that kindly regard to which their calamity entitles them."

A satirical production of those days presented Dr. Howe and Charles Sumner in the light of knights-errant of philanthropy, constantly on the lookout for some human right to vindicate, some injury to redress. As his biographer points out, Howe was more than a knight-errant, he was a chevalier.

Whether engaged in the cause of Greek freedom, whether active in the French and Flemish revolt, whether carrying aid through unfriendly Prussia to the Polish refugees, whether founding the first school and opening up new worlds to the blind, whether active in establishing the first school for the deaf and dumb, the first school for the feeble-minded, the first hospital for the insane, or whether as chairman of the first State Board of Charity, laying down those wise principles of public charity which we follow today, or whether active in the abolition movement—Dr. Howe's life was a life of service to others and, in most cases, service to those who were helpless, who could not help themselves, and who had no friends except those he himself raised up for them. Through his wisdom, foresight and vision, it is possible for us to gather here tonight to lay plans for carrying on the work which he began seventy years ago.

FEEBLE-MINDEDNESS AS AN ELEMENT IN POVERTY.*

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For our purposes the word *poverty* means the more or less chronic insufficiency of the means of keeping a reasonably sanitary abode and enough food and clothing to maintain the body

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in good working condition—plus the additional means of like maintenance for those properly dependent.

It has two aspects: that is to say, the family that somehow gets along without charity but which lives in an inadequate home and starves itself into an early grave; and the family that, failing even in this, comes upon private benevolence or the public rates for its necessary support. These two aspects are but degrees of one and the same condition. The reasonable standard of living which this definition implies, represents the poverty line. Above it dwell something less than nine-tenths of all our citizenry. Below it lie something over ten million men, women and children in this free country.

Why, then, are the poor in poverty? There is no one cause for poverty. There are in the world this afternoon millions of men, hard-working, honest, intelligent and gentle, who have not the means wherewith to buy their children bread. There are hundreds of bodies lying this moment in the morgues of American cities—the bodies of old men and women who have toiled honestly all of their lives, spurred on by the fear of a pauper's grave, and who have, nevertheless, died in the poorhouse. No discussion of ours then should seek to explain away those hard conditions which the competitive struggle for bread has imposed.

However, it is not only competent, but highly commendable that we seek to analyze some of those many causes for present poverty, to the end that we may possibly discover a primal source from which they flow. Here is a family too poor to get along without public aid. The father and some of the children have tuberculosis. It is an intelligent family, willing and eager to work. It lacks only the strength. It lives in a miserable hut that breeds disease. It has always lived there. Disease is given as the cause of poverty. But we should look back into the preceding generations to find a cause for the tuberculosis.

Here is another family of a deserted wife and five small children. She is eager to work and does work, but it is not enough. She is in poverty. The husband has abandoned his trust. The desertion is the popular cause of the distress.

And here again is a family group of an aged grandmother, her daughter and three little grandchildren. The father of these children has been killed in an industrial accident. He was a pretty steady drinker. The accident is the statistical cause of the dependency.

For the purposes of social analysis, those causes will not do. Some of them, if carefully studied, will turn out to be occasions rather than causes. Tuberculosis is a famous seizer of opportunity. Alcohol, though boasting many converts from the ranks of the highly intelligent, gets first and most frequently into the head that has least power to visualize the consequences,

least strength to appreciate the scope of life's daily problem.

Back of those superficial causes, whether it be in the immediate generation or in the next or the next—keep going and you are pretty sure to find it—you will discover a fatal lack of judgment, a defect of will, a mental dullness that has brought this train of troubles to its progeny.

Back there at the branch roads there has been a failure to discern the right road to take. "There is a tide in the affairs of men, which, taken at the flood, leads on to fortune. Omitting, all the voyage of their lives is bound in shallows and in misery."

The tuberculosis, the syphilis, the inebriety, the uncontrollable temper of today, are but the physical symptoms resulting from that lack of insight, that failure of judgment which turned the affairs of that family into its sequence of miseries and has since maintained it there. Make full allowance for the operation of economic forces. Say, if you will, that monopoly of capital and of labor are grinding the breadwinner,—and I for one believe that business America is an almighty long way from being free and impartial in its opportunities,—give full scope, I say, to environmental conditions, and you must still reckon with that original cause—the human equation.

It would be trite to say, "the better the mind, the better the judgment," and yet that comment is basic. I want to call your attention to a few of the defective families that have been studied, to find, if we can, any social connection between the defect and the condition of poverty in which those families have been invariably found.

One of the seven wonders of Indiana is the tribe of Ishmael. Five thousand persons in six generations have been traced and the mental status of a great many roughly ascertained. The record is one of feeble-mindedness passed down from parent to child. This is the great stream of destiny in that family. Lying along its course, like stagnant bayous filled with the slime and decay of society, are those other attendant facts,—prostitution of about half of all the females, crime record for nearly half the men, syphilis rampant, illegitimacy preponderating, and pauper aid to such an extent as to absorb three-fourths of all the public poor relief funds of the county. If the condition of that tribe is an economic or political accident, then Indiana has the miracle of Jonah relegated to the advertisements.

Look at the Jukes of New York State. They were a shiftless tribe, a spreading clan of ne'er-do-wells. Out of 709 individuals traced in several generations, 180 had either been inmates of almshouses or had been in receipt of public aid. Dugdale estimated that the relief thus given would have amounted to full support for a single individual for 800 years. A low estimate for the 500 individuals who were known to belong to the tribe, but who have not been traced, would

have lengthened this period to 1150 years; and that represented a study of the overseers' records for only 64 out of the 255 years during which this group was receiving public relief. They are a tribe of hereditary paupers, which is another name for hereditary worthlessness. And that, in turn, we have come to know, is a paraphrase for hereditary mental dulness or feeble-mindedness of mind.

Insufficient mentality to have the will to be respectable and self-supporting—that is the record of the Jukes. Incompetency is their premise; poverty is their conclusion.

Turn to the hill folk here in our own Commonwealth:—737 persons in 5 generations were traced; 65 of these had received public relief; 37 of this number were state wards; 48% of the entire group were found to be feeble-minded, and if the tendency to strong drink be compounded to a one-man basis, there would be about 600 years of heavy drinking and 300 years of medium drinking—a mild estimate of the whiskey bill would have been \$64,000. Davenport estimates that the total cost to the State, of the prosecution, support and loss of earning power caused by this tribe would be about \$500,000. Over \$60,000 of it was pauper support. And yet these figures go back only 60 years. The amount of town aid which the one tribe has required decennially has increased 400% in the past 30 years. Thirty-seven of their children have been state minor wards. Half of all the school children from this group show mental deficiency. They are the future parents, who must use their judgment and their will power to keep themselves and their dependents above the poverty line, and half of them are born short. And what of the other half? Their origin is against them. They do not appear to be dull-headed enough to be called feeble-minded. Who can say that they will be wise enough to turn the tide and voyage of their lives away from shallows and from misery?

The Name are another tribe of dull-minded people—living in abject poverty, squalor, chronic immorality, chronic inebriety. Seven hundred and eighty-four persons in eight generations have been traced. The tribe is economically helpless. Its members have no judgment and no determination, and because they lack these, they possess no substance. They save nothing. Their bodies are diseased; their minds as dull as the clod. They are bridle stock, of no earthly use as citizens,—the fertile soil of social disease. So long as such groups are guaranteed the constitutional right to life, liberty, and the pursuit of happiness, merely as they understand it, without demanding that this privilege be extended in the light only of the public welfare, just so long will poverty stalk through the land, and we shall continue to see the disgraceful spectacle of starvation in the midst of times and conditions claimed to be rich and prosperous. The

way to reduce poverty of the chronic sort is to breed a better citizen.

Let us not lay undue emphasis upon these particular family studies; they are the merest straw to show the direction. In almost every community of any size in the country they can be duplicated. Davenport makes the general comment that "The rural communities of 'degenerates' usually have this in common: an unusual lack of industry, retardation in school work, and a failure to observe the conventionalities in sex-relationships. They work when the mood overtakes them; consequently they remain poor."

Scan as we may the record of poverty; make full allowance for the hard economic conditions that drive the honest toiling citizen below the poverty line, after a long life of industry; reckon with the baneful effects of a theory of economics which demands free competition to the remotest degree and a practice the world over which has far outgrown it; recognize the claims of sickness, accident, and the rigors of climate. Make all these allowances, and we still come down to the unmistakable conclusion that feeble-mindedness, not only of the legally ascertainable degree, but of all degrees affecting judgment, is probably the greatest source of that poverty which knows no elevation. Beginning there, our path leads to those physical conditions which we are in the habit of recognizing as the causes of poverty. They are not causes; they are symptoms; the tuberculosis which seems to have wrecked the X family is not so important in our study as the fact that the tubercular father spits all over the floor. That is the fact that puts wife and children in peril. Potential breadwinners are wrecked through that carelessness, and as people go, while the reasonable and sensible man is often careless, the mental defective is invariably so. The syphilis that has wrecked this other breadwinner may, and often does, beset the steadily-working citizen, but its easy mark is the mentally, morally obtuse individual who hasn't judgment enough either to avoid it himself or to guard against passing it along to his offspring. Many men of stolid mind become drunkards, but the mentally weak are its readiest victims, and yet we hear it said that poverty would shrink by half if the abuse of alcohol could be done away with.

No consideration other than this close relationship between feeble-mindedness and poverty could with equal force bring out the true significance of that dreadful fact about feeble-mindedness,—namely, that it is hereditary in at least 80% of the cases.

The practical definition of a feeble-minded person is one who, though capable of providing his living with his hands, is unable, by reason of mental defect, to make his living in competition with his more intelligent fellows. When we realize that the feeble-minded citizen is by defi-

nition a pauper, and when we further consider that the condition breeds as true as the spots on a dog, we can vaguely picture to ourselves the tremendous social saving in preventing their propagation, and the incalculable social waste attending our neglect to catch this social opportunity at the flood tide.

WHAT IT MEANS TO HAVE NON-COMMITTED FEEBLE-MINDED IN THE COMMUNITY.*

BY C. C. CARSTENS, BOSTON,

Secretary, Massachusetts Society for the Prevention of Cruelty to Children.

THE progress which physicians and alienists are making during the present decade in the recognition, training and care of the feeble-minded is having an influence of the greatest importance upon the social case worker, only to be compared with the influence exerted by the work of societies for the care and prevention of tuberculosis in a previous decade. As in the case of tuberculosis in the past, so, until recently, case workers have thought that feeble-mindedness was one of the visitations of Providence. It was the duty of the State to provide for the unfortunates when, because of destitution or other reasons, relatives were unable to do so, and the feeble-minded were generally left in institutions or discharged at the request of relatives or friends. In certain States a more rigid policy was pursued, but the social implications of feeble-mindedness were not understood by any considerable group of citizens.

The progress of the last few years has pointed out a new lesson. The case worker is finding that his most stubborn problems of relief, delinquency, neglect, cruelty and illegitimacy are in so many instances associated with clear or border-line cases of feeble-mindedness that the principles of social case work are either being confirmed or put on a more substantial foundation. For example, the almshouse pauper type has for many years been recognized when found in the almshouse, but we can now find it while the pauper is still living in the community, beginning to depend upon public and private charity whenever domestic or economic stress is felt in any unusual measure, and long before the process of physical and moral degeneration has driven him as a last resort to the almshouse.

Again, it has been long known that the case of the young mother with one child born out of wedlock is very different from the usual case of the mother with two or more illegitimate children. We got half way at the truth when we reasoned that the girl with one child, who out of that experience became a moral, upright wo-

man, had the mental and moral stamina to learn the lesson of experience from her terrible plight of illegitimate motherhood, and she went and sinned no more; while the evidence of the two or more illegitimate children in another case proved that the girl was not or had not been able to learn that lesson, and must be thought of as a moral weakling. But now comes the alienist, to prove that the case of repeated illegitimacy is frequently but a manifestation of mental deficiency, so that the case worker immediately questions mentality when a mother with an illegitimate child is found, with the hope that further illegitimacy may be avoided.

This change in attitude and method in case work, growing out of the progress that scientists have made in eugenics and mental hygiene, would make an interesting subject of study for the social worker. But we can only hint at it here. Our task is rather to point out how the uncommitted feeble-minded still complicate the problem of the case worker, and how far a community must still go before it may claim to have ample protection against the burdens that feeble-mindedness brings to it. There is no single case work organization, no settlement, no educational and civic association that does not have to reckon with the weaknesses that feeble-mindedness brings in its train. They are so manifold in their manifestations that they cannot be presented within the confines of a short paper. Following are a few typical illustrative examples:—

1. *Pauper Marriage.*

While the mother was at the Long Island Hospital for confinement of her illegitimate children, she became acquainted with her husband, who had been an inmate there many times. She bought her own wedding ring, paid for the issuing of the license, and has contributed to her own and the children's support much more than her husband has at any time. As a matter of fact, he has been on the Island much of the time since the marriage, and seems a selfish, lazy pauper. Fortunately, there is but one child living of this marriage. After several years of the mother's drifting in and out of Long Island, a social worker proposed that she be examined while there. Upon examination, she was found to be feeble-minded, and, after a good deal of difficulty, was committed to the State School at Wrentham. At some time within the last seven years the following agencies, which is by no means a complete list, have devoted time, money and effort to the support and care of the members of this family: The Boston Juvenile Court, the Home for Destitute Catholic Children, the South End Day Nursery, the Boston Overseers of the Poor, the Boston Associated Charities, the Boston Dispensary, the Instructive District Nursing Association, the Boston Children's Aid Society, the Children's Mission, and the Massachusetts Society for the Prevention of Cruelty to Children.

2. *The Dependent in the Community.*

A young woman, born in 1892, who has had at least four illegitimate children, has been most promiscuous in her sex relations. She has been living

* Read before the Conference on Feeble-mindedness of the Massachusetts Society for Mental Hygiene, Ford Hall, Boston, Dec. 14, 1916.

in the lodging houses of the South End district of Boston, and like a leech, has clung to lodging-house keepers, whose generosity, patience and sympathy she has invariably enlisted and abused. When in trouble, various charitable agencies were turned to, and assisted in one form or another. Among these were the Society for Helping Destitute Mothers and Infants, the Salvation Army, the Children's Hospital, the Division of Minor Wards of the Massachusetts State Board of Charity, and the Massachusetts Society for the Prevention of Cruelty to Children. With an increasing recognition of the marks of feeble-mindedness, an examination was brought about, and it was found that she was a border-line case of feeble-mindedness, but not considered committable. She has neither self-control nor shame. While at court to enforce the payment of support against the father of one of her illegitimate children, she was making appointments for immoral purposes among the hangers-on in the corridor of the court house.

3. Adoption of Child by the Feeble-Minded.

In one of the probate courts of the State some four or five years ago, a lawyer presented a petition for the adoption of an infant by a woman living at that time in this State, the petition having been assented to by both parents. The petitioner was a feeble-minded hunchback, who worked about two weeks in this State and then removed the child to New Hampshire, where it became dependent. She bore a bad reputation, drank and smoked habitually, and used morphine. Efforts have been made to revoke the adoption, but without success so far.

4. Immorality and Feeble-Mindedness.

In this instance there are feeble-minded twins of 17,—a boy and a girl. The father is clearly of low mentality and is constantly losing his work because of his drinking habits. The mother, who died of tuberculosis in 1907, had a record for being peculiar, but was not deemed sufficiently insane to commit. The children of the second wife are being cared for by one of the private charitable agencies. There is a third wife, who is a very poor lot. She drinks and is immoral, and lives in the vicinity of the Charlestown Navy Yard. It was not surprising under these circumstances to find the girl inclined to commit immoralities with sailors, and when she was brought before the court it was discovered that she was 8+ in mental development. There was no vacancy in the institutions for the feeble-minded at that time, and she was, therefore, committed to the Industrial School for Girls at Lancaster. The boy was examined at the same time, and his mentality found to be still lower. At the present time he is working regularly and seems tractable, and an aunt of good reputation is looking after him.

5. The Clandestine Prostitute.

She was the mother of two children when brought to our attention, the older of whom was illegitimate. There were with her also two children, 14 and 16 years of age, of the man's former marriage. He drank and was apparently as irresponsible as the woman. Sometimes she would take up with one man for a time, but her sex relations were most promiscuous. Not long after the problem came to our attention, the children were removed from the mother's custody. The paternal grandmother provided a good home in a neighbor-

ing town, and upon her plea the children were placed with her, but not long after turned over to the mother again. Several years later the Society was drawn in to protect a group of children in an entirely different part of the city, who were identified as the same group above referred to, with the addition of two illegitimate children born since the husband had left the mother. Complaint was made against the mother of lewd and lascivious cohabitation. She was examined when brought before the court, tested eleven years and pronounced a defective delinquent. The children were committed to the Massachusetts State Board of Charity, and have thus become wards of the State and an expense for many years to the Commonwealth, but the mother, after a short sentence, is again adrift.

6. The Border-Line Delinquent.

She was 16 years of age, the youngest child of five. Because of her father's and mother's intemperance and the separation which resulted from it, the child had been dependent upon charitable people and charitable institutions for a number of years. She drifted about a good deal, and finally the father placed her in the House of the Good Shepherd. She succeeded in getting out of there by cutting a vein in her wrist and being transferred to the City Hospital, and the sisters in charge did not feel that they could have her returned. Soon after this the Psychopathic Hospital pronounced her backward, but not feeble-minded, and on later examination she was found to be four years retarded,—a border-line case. As a result of this diagnosis, she was committed to the Trustees for Children of the City of Boston. She has run away from her foster home at least once, and it is easy to see that the end of the community's experience with her is not yet.

7. Young Mother with an Illegitimate Child.

She was only a slip of a feeble-minded girl of 14, but she had been immoral with so many men and young boys that she could not tell who the father of her child was. The infant was born in the Talitha Cumi Home, and against the wishes and requests of those most interested, the girl's mother insisted that she and the baby come home. Her father, a hard drinker, had left his family several years ago. The mother was not very bright, but was struggling along to make ends meet. She took a genuine interest in her daughter and grandchild, and gave a great deal of attention to the latter. A few months after the girl returned home she again began her immoralities, and her mother was then willing to have her sent to the State School at Wrentham. Her mother is caring for the baby. Three different children's agencies have devoted much time and effort to the work in this case.

8. Immoral Relations Between Children of the Same Family.

In this instance the father was a periodic, hard drinker. The mother was dead. The stepmother was accused of the vilest practices with her step-children. The 14-year-old girl and the 13-year-old boy, according to information that seems reliable, had been taught these practices by the stepmother. The girl was found to be a border-line feeble-minded case. She finally ran away from home and was committed to the Industrial School for Girls at Lancaster, and the boy was sent to the Lyman School for Boys. Not long after this the father

was sentenced to three months in jail for larceny, and his stepson, to six months for lascivious acts. A thorough mental examination of all the members of the family would be liable to reveal others feeble-minded besides the 14-year-old girl.

9. *Great Expense in Money and Effort Wasted.*

In this particular family the father had deserted in 1908 and had not been seen since. An imbecile boy was committed to the Wrentham State School about the same time that the 14-year-old girl was placed in the House of the Good Shepherd. The sisters gave the girl up as incorrigible and the court then placed her in the custody of this Society, who enlisted the interest and service of the Boston Children's Aid Society. The two societies struggled along for a number of years to find good homes for the girl and to keep her contented and tractable when placed in such homes. Finally the Children's Aid Society had her examined and found her a committable feeble-minded child. There was no room in either of the schools for the feeble-minded at that time and she was therefore committed to the State Board of Charity, and an application made for her admission to the Wrentham State School when a vacancy should occur.

10. *Child Awaiting Deportation.*

The father and mother in this case are of foreign parentage. The mother has been at least once in the State Hospital at Taunton. This girl of 15 was reported by the school teacher as spreading evil reports about her mother, and the mother, when interviewed, made similar immoral accusations against the girl. It was discovered that the girl had arrived in America only four months previous to this time; that she had been immoral before her arrival and since, and that since her arrival she had infected several school girls and boys with gonorrhea. The Psychopathic Hospital found her to be an imbecile, but deportation at this time to one of the countries at war seems impractical and inhuman, and so she is being temporarily cared for in the Wrentham State School without commitment.

These ten instances are but a few of hundreds that might be cited to illustrate the stupendous task which social agencies assume to deal with while the feeble-minded remain in the community, and it is reasonable to assume that there are many instances which have never come to the attention of any social agency before they become the active factors in various kinds of human tragedies.

The various social agencies of Boston have for many years struggled, and are struggling today, with indifferent success, with the effects of feeble-mindedness. They realize that it is useless to grant aid to a family in which one or both of the parents are feeble-minded, for the money will be wasted, the children will be neglected, one or more of them will be likely to be delinquent, and the money that has maintained the home has only maintained a group that become an increasing burden for the future. The relief societies that are interested in making

their resources count for good citizenship see resources that could be put to better use frittered away on families that add weakness rather than strength to the body politic.

The social and civic agencies that are interested in the development of better standards of labor and better rates of wages find the borderline feeble-minded in employments where they cannot earn a reasonable living, but where they are used at low rates of pay to do the more simple tasks. The children's aid societies find it necessary to use their funds, which should be available for the care of the promising children, to care for feeble-minded children, for whom the State is unable to provide in its institutions or for the uncommittable border-line feeble-minded that make slight response to the effort that is made in their behalf, or are so unreliable that they upset all reasonable plans that the community can make.

For the purpose of gathering together the successful as well as the unsuccessful experience of the various social agencies dealing with families in Boston, the League for Preventive Work was organized about two years ago, through which the twenty constituent agencies that provide for its support may pool their information and learn from each other and from the general experience of the community. Feeble-mindedness is one of the degenerative influences in the lives of families with which all of these agencies deal. It contributes weakness to any constructive plan that we may make. The League is a defensive alliance in case work, by means of which our various agencies may learn from each other's failures, and may contribute strength through a broader and more intelligent view of the whole situation. It is the expression of a constructive interest in feeble-mindedness on the part of the twenty agencies.

Social work has during the last ten years been increasingly harnessed to an exact evaluation of scientific facts. Any new discovery in science, whose bearing upon case work is recognized, is eagerly accepted. On the other hand, our social case work agencies have a more or less valuable body of material, dealing with thousands of families. Through the great specializations which have come into social work, the whole social experience of the community with the family is divided among different agencies. The League believes one of its functions to be the gathering together of reliable facts, in accessible form, of the community's experience, so that it may also contribute in increasing measure what it has learned. In this way we hope that the League may be of greater service than to the agencies themselves; that from its material there may come contributions in social science which no single agency is able to make.

A PLEA FOR THE INSTRUCTION AND
AFTER-SCHOOL CARE OF THE FEEBLE-
MINDED DEAF.*

By CAROLINE A. YALE, NORTHAMPTON, MASS.,
Principal, Clarke School for the Deaf.

It may seem absurd to take the time of this body for the presentation of the needs of a small sub-group of that great class whose needs you are considering in so comprehensive a way, but surely a feeble-minded child is none the less so because he is also deaf.

A fact which neither time nor place alters was long ago stated in those oft-quoted words of the peasant preacher of Nazareth,—“For he that hath, to him shall be given; and he that hath not, from him shall be taken away even that which he hath.” This is but the assertion that abundant harvest results only from abundant seed scattered; wealth produces wealth; power of body and mind are the invariable result of endowment well used; and, on the other hand, for the meagerly endowed, either in body or mind, that little which he has is lessened by disuse and abuse. No clearer illustration of this truth can be found than in the restrictions which the loss of one faculty imposes upon the remaining faculties. The deaf are not so much to be commiserated for their loss of all the sweet sounds of life as for the loss in mental development which comes from the failure of the stream of language to flow in through the open channel of the ear; and the less the original endowment of mind, the greater must be the hampering and dulling effect of the deafness. The causes which produce deafness are, many of them, also causes of feeble-mindedness, and these causes surely lower the general vitality of the child both physically and mentally; therefore the percentage of feeble-mindedness among the deaf will probably always be higher than among the hearing. These feeble-minded deaf children will be found grouped in several classes: (1) those who have been wholly neglected, being of too low mentality to gain admission to any school; (2) those who, having gained admission to a school for the deaf, are retained but a year or two and then begin a round of transfers from school to school, and at last are turned out fitted for nothing, quite incapable of self-support and more incapable of self-control—a menace to society; (3) those who have been transferred from the schools for the deaf to the institutions for the feeble-minded. It is not strange that these institutions hesitate to admit such children. Overcrowded as they are, they cannot be blamed for hesitating to assume such a special task as the instruction of those who, to their feeble-mindedness add deafness, and who, because of their lack of hearing, must receive

instruction through the eye and not through the ear; (4) added to these, there is a considerable number of cases of the same sort, but slightly higher in grade, kept—under protest—in the schools for the deaf, because there is no other place provided for them. Every school for the deaf admits a percentage of pupils who suffer from two defects—neither, by itself, being so marked as to give decisive classification. These children are mentally of low grade and, in addition to that, their hearing is defective. They are often retained in the public schools until long after the age when they could be helped most by the work of the special school. At twelve or fourteen, they grow troublesome, and something has to be done; then they are relegated to the school for the deaf. There, in smaller classes and with more individual instruction, the exact status of the child is more definitely determined. Some respond well to this special training, but in not a few of these cases the defect is found to be largely mental. The principal of one of the schools in a neighboring state recently made this statement: “In my experience I have come in contact with only a few totally deaf children who could rightfully be classified as feeble-minded. On the other hand, there is a very large number of hard-of-hearing and border-line cases in our schools that class as mentally deficient.”

All those reasons which are accepted as adequate justification for the separation of the hearing feeble-minded from the normally endowed are as applicable to these classes among the deaf. It is certain that in the schools for the deaf these doubly handicapped children are not receiving the sort of training their capacity and condition require. It is wrong to force them to spend the greater part of their time on the usual studies of a course suited to normally endowed deaf children. As the same able instructor, in speaking of this class of the deaf, has said, “The instruction should be based upon industrial work pursued through regular class-room activities, and not allowed to ‘degenerate’ into reading, writing and arithmetic.” Neither should they be subjected to the constant depressing comparison of their own limited ability and meager acquirements with those of their more fortunate fellow students. For their own sake, they should not be retained in these schools.

It is equally important that these most unfortunate children be separated from the deaf children of average mental ability, for the sake of the larger and better endowed class. The boys and girls who, despite the handicap of deafness, are able to pursue the studies of the high school and college, or those who go from our special schools into independent self-support, assuming intelligently the duties of citizenship, should surely not, during any part of their training, be classed with the feeble-minded.

Dr. A. L. E. Crouter, of the Mount Airy

* Read before the Conference on Feeble-mindedness of the Massachusetts Society for Mental Hygiene, Ford Hall, Boston, Dec. 15, 1916.

School for the Deaf in Philadelphia, one of the leading authorities of the country on the subject of the instruction of the deaf, says: "In common with most teachers of the deaf of the present day, I am of the opinion that the presence of feeble-minded deaf children in a school for deaf children, otherwise normally endowed, is harmful and unwise. It is harmful in that it subjects normal deaf children to influences that are morally injurious, and materially interferes with their best mental development. The presence of such children impairs the usefulness of the school by exacting time that may more wisely and more profitably be expended on normal pupils. It interferes with the grading, it exhausts the nerve strength of teachers and caretakers, it robs the normal deaf child of time and training that are justly his, and in the end it does not pay for the time and labor expended. The two classes (the feeble-minded deaf and the normal deaf) are so dissimilar in their condition and needs, and in the object and results of their training, that it is obviously unwise to bring them together for purposes of training and instruction. In the care of the feeble-minded, a small proportion excepted (morons), their care and training are largely custodial, and, in my opinion, should always be made so for the protection of the community; in the case of the normal deaf it is wholly educational, having for its only purpose intelligent, law-abiding, self-supporting citizenship. In the Mount Airy School feeble-minded pupils are never knowingly admitted. If by chance any are received, as soon as their mental condition is discovered they are discharged. Pupils not feeble-minded but of low mentality are retained just so long as they manifest any improvement; they rarely remain the full period of ten years. I suppose that fully thirty pupils have been denied admission during the past five years on account of feeble-mindedness, and as many more discharged before the completion of the full period of training on account of low mentality and consequent inability to profit by the regular course of instruction." This school contains over five hundred pupils.

In two of the smaller European countries the attempt is made to base the education of the deaf on scientific classification. In Schleswig all deaf children enter a preparatory school, from which the brighter ones are removed to Grade A, as it is called—a school in another part of the city. Others are placed in Grade B school. After two years the dullest are transferred from this preparatory school to the C grade—a school for feeble-minded deaf children. In Denmark the procedure is practically the same.

In our own country no separate schools have been organized for deaf children of differing degrees of mentality, but in most, if not all, the schools there are classes of very dull pupils whose work is modified to fit their low grade of ability. In some schools, even distinctly feeble-

minded children are retained. As stated previously, there are some excluded from all our schools either at the outset or after a fair trial, as incapable of profiting by the regular work of the school and as being a hindrance to the work of the brighter pupils and an influence not desirable morally.

The suggestion has been made, that if one school for the feeble-minded deaf were to be established in New England, it would be ample provision for the unfortunate of this class. That would, no doubt, be true, but it is necessary to keep in mind the after-school care of these same boys and girls who will need the closest supervision and custodial care to prevent the multiplication of their kind. This need of custodial care seems to indicate that the grouping of them with other custodial cases of the feeble-minded is the wiser course to pursue. Would not the establishment of a department in the new school to be opened at Belchertown seem a wise provision for the needs of this class?

Mr. Wheeler of the school in Hartford says, reporting for the last three years, "we have refused to admit three children who seemed feeble-minded. Eight have been dismissed,—two from Massachusetts,—and all of these children were of such low mentality that they were a menace to the others. We have no room for feeble-minded children, and teachers of the deaf should not be expected to teach the feeble-minded deaf in the same classes with normal deaf children. There are, no doubt, in New England quite a number of deaf children who could not be admitted to any school for the deaf. I wish that some arrangement could be made with one of the states to take all of these children and put them in a department by themselves under the care of a person who understands the deaf."

Mrs. Warner, principal of the Beverly School, says: "I would certainly urge that steps be taken for special provision for the feeble-minded deaf children of the state, either in a school for them or under a special teacher in a school for the feeble-minded already established. As the children grow older, the need of some place where they can live and not be a menace to the community is much more apparent."

Monsignor Splaine, in charge of the school at Randolph, says: "We are glad to hear that some effort is to be made to secure a better understanding of the feeble-minded deaf child. We are occasionally obliged to reject applications for the admission of such children to our school, as we do not think it wise or just to retain them in schools with normal deaf children. Sometimes we have given a child the benefit of a doubt and admitted him on trial, and have later found it necessary to discharge the child. In such cases, parents have said that they had great difficulty in securing admission to the existing schools for the feeble-minded. A special department in the school for the feeble-minded, or, better still, if the numbers warrant

it, a special school for these sub-normal deaf children, similar to those now established in Europe, would seem to us the best method of caring for them."

Miss Jordan, of the Day-school for the Deaf in this city, and Miss Fuller, so long in charge of that school, express themselves as "glad that there is a possibility of giving to the deaf children of this state, who are mentally below the normal type, instruction suitable to their needs." They think "they should have a school entirely independent of other handicapped pupils and should have skilled, experienced, sympathetic teachers." They urge also that "the greatest possible care should be exercised in deciding about admissions to schools for these children," and "that only persons of experience with deaf children and skilled physicians should take the responsibility of deciding as to placing a child in such a school."

These are the opinions of those who are in charge of the schools in which the deaf children of this State are being trained. Is it not evident that the problem of our feeble-minded deaf is of sufficient importance to demand the thoughtful attention of those who are attempting to solve the great general problem of feeble-mindedness?

THE DEFECTIVE GIRL WHO IS IMMORAL.*

BY MABELLE B. BLAKE, BOSTON,

General Secretary, Boston Society for the Care of Girls.

THIS paper deals with the high-grade defectives, those who to all appearances approach most nearly the normal type.

It is not a great many years that we have been able to recognize the most typical cases of this group. They approach too closely to the lowest types of the normal to be distinguished readily without more or less observation.

It is a group out of which may come the delinquents, the diseased, the unmarried mothers, and those with immoral proclivities, spreading disease and moral corruption.

Even in this day and generation a feeble-minded girl is often brought before a court and treated as a responsible person. She may, perhaps, be sent back to her home with an admonition to mend her ways. She may be put on probation or possibly committed to an industrial school. Whatever the decision, she fails to respond to treatment. If she goes back to the old environment, she soon falls a victim to the same influences that first brought her to the court. The community denounces her and says she is incorrigible. She, the poor unfortunate that she is, becomes a source of corruption and disease,

* Read before the Conference on Feeble-mindedness of the Massachusetts Society for Mental Hygiene, Ford Hall, Boston, Dec. 14, 1916.

and she bears children, one after another, who inherit her misfortune.

In a recent study made in a city in a nearby state of the problem of girl delinquency, out of a group of twenty-nine cases investigated, the following results were given. Of this number six were found to be subnormal. Three of the girls were found to be feeble-minded, two border normal, one unstable and neurotic, none able to care successfully for herself. In addition to the number examined, one other is known to be feeble-minded, one is in the incipient stages of insanity; six more give evidence of being decidedly subnormal, and would undoubtedly be found deficient if given the Binet test. Speaking as conservatively as possible, eight girls of the twenty-nine (27.5%) are known to be subnormal mentally. There are indications that the entire fourteen (48.3% of the whole) are subnormal; also associated with this mental deficiency is usually bad heredity of various sorts and a permanent lowering of moral tone through long contact with degrading environments.

Still going on with this study group, the report states that, with the exception of one girl who continued until she was fifteen years of age, all of the twenty-nine girls left school at the age of fourteen. The large majority show a retardation in their grades.

Never attended school	1
1st grade	1
3d grade	2
4th grade	3
5th grade	8
6th grade	6
7th grade	6
Unknown	2
	29

In studying a group of 196 children who had previously been under the care of the Boston Society for the Care of Girls, and who had been returned to parents and relatives, we found that, out of thirteen who were defective but not commitable, four, after leaving our very careful supervision, gave birth to illegitimate children.

Fortunately, we have come to a realization that no amount of effort on these defective girls will bring about a desired development, because they do not have the faculties upon which to build.

Let me give you three cases of girls whom we have known intimately, each girl being a high-grade defective.

CASE 1. Sarah, a girl of fifteen, came to us before we realized the importance of a mental test at the outset. She came for protection of herself and her illegitimate baby, three weeks old. When Sarah's father had died, five years previous, in Nova Scotia, the mother came to Boston with Sarah and three younger children.

Sarah's history showed little development mentally. She was often promoted in school to make room for the next child, and because she seemed too old to remain in the lower grades. The father of

Sarah's baby had been frequently entertained in the home, and had also had wrong relations with the mother. The baby soon died, and it was our task to place the young mother. For the next year and one-half she was placed in four working homes. In each place she worked well, was a good house-keeper, but could not be trusted away from the family. She told glaring tales of immorality. She rummaged drawers, and would pilfer such small things as soap, writing paper, trinkets and things of no value. She soon became independent and saucy and showed an ungovernable temper. It was her capability at housework that made us slow to recognize her mental lack. When Sarah was given a mental examination she was at first considered doubtful, but later diagnosed as a moron. Then came four months of waiting before there was a vacancy at one of the schools for the feeble-minded. During this interval she grew steadily worse and, although supervised closely, she would get out of the house in the middle of the night and go with the first man whom she would meet perchance on the street. Each time she was penitent and begged to be given another chance.

In contrast to this restless, stubborn, unhappy, immoral girl in the community, her proclivities, over which she had no control, growing steadily worse, we now see, two years later, a young woman at the State School at Wrentham, happy and capable in her daily work, singing in the chorus, contented with her surroundings, and not wanting to come away, even for a short vacation. She is the same girl who came to us with her illegitimate child, and who was uncontrollable. She has no more mentality than the day she entered the school, but she has been under the care of those who know how to train the defective; she has been away from the temptations which she could never resist; she is happier than she has ever been before because we are not trying to develop her beyond her possibilities. The community is saved from her corrupting influence, and no more children will be brought into the world to suffer like consequences.

Case 2. Another case is that of a sixteen-year-old girl, who was referred because she had been away from her home for two days, and her family were frantic, not knowing where she had gone. When she was located the impression she made was that of a reticent and shy girl, which characteristics quickly changed to an irritating stubbornness as soon as she was not permitted to have her own way. She had romantic notions, and an impractical idea of men and their attentions to her. She was quick at scheming for the purpose of effecting her own plans, but was childish and unreasonably self-centered, having no consideration for the feelings of other people. She was deceitful and untruthful. She also exerted an unwholesome influence over other girls. She said very little, but complained that everybody "picked" on her.

Helen was diagnosed as defective and admitted to one of the State Schools. In one month, however, her parents insisted on her return to the home and she was released, only to go back to her old environment, where she is bound to be a menace. We must go a long way in educating the lawmakers, before laws will be enacted making it possible to retain patients, if the parents do not wish them held.

Case 3. Four years ago Mary, a girl of eighteen,

was brought to our attention. Her foster parents, who had adopted her when she was a very little girl, found her to be uncontrollable, and they feared immorality would result. Investigation revealed the fact that the girl was illegitimate, and that her own mother was an immoral woman. She was one of one hundred children who were offered for adoption by a well-meaning society. The foster parents were well-educated people, able and anxious to give the girl the best opportunities. At the age of ten the girl was insolent, stubborn and more or less obdurate. At the age of fourteen she began to steal, was saucy and disagreeable, and showed much hatred towards her family. At the age of seventeen she had managed to reach the first year in high school, but truanted several days, going to moving pictures, and by writing clever notes managed to conceal this fact for nineteen days. She had already infatuated a young college man of promise. Physical examination showed her to be well developed. Mental examination proved her to be defective but not committable.

HISTORY WHILE UNDER THE CARE OF THE BOSTON SOCIETY FOR THE CARE OF GIRLS.

Mary was much interested in sewing, and was placed at board where she could attend trade school. She went to the school fifteen days, apparently liked the work very much. On the sixteenth day, however, she did not go to the school, and when it was discovered, she told a most graphic story as to how an intimate friend of hers had died. It was afterwards proved that the whole story was false. She had been spending her time at motion-picture houses with strange men. Mary, upon her own request, was placed in a private family, where she was to do the work of a seamstress. She remained here a little less than three months; although she had many interests within the family as well as many without, which were wholesome, she soon found objectionable associates and could not be trusted. She next took a position as chambermaid in a women's boarding house. She remained three months, was out until the early hours of the morning many times a week, and was discharged. Shortly after we first knew the girl she located her own mother, who, to all appearances, was still living an immoral life. After leaving the boarding house, Mary returned to her mother. It was at this time that every influence for good was taken away and the girl utterly collapsed morally.

Subsequent History. Shortly after returning home, Mary joined a cheap theatre troupe. It was later learned that she was living at a questionable hotel with the manager of the troupe, passing as his wife. When our agent appeared with an officer, she had left and could not be located. It was five months after this episode that Mary was found in an indescribable condition, in a nearby town, at the home of a relative, desperately ill with a gonorrhreal infection. She refused medical aid. The matter was referred to the Board of Health, but before they could act she had again disappeared. Another five months elapsed, when a letter came to the office from Mary, stating that she was married. It was afterwards learned that Mary was five months' pregnant when she married the man who was not the father of her child. She lived with her husband but a short time, and when the baby was a year and a half old was reported to the Society

for the Prevention of Cruelty to Children because of the neglect of her child. Mary was drinking and smoking, and probably a drug-user. At this time another mental examination was suggested, there having been three since the first. When the doctor went to see the mother and child, again they had disappeared. This was nine months ago, and up to the present time they have not been located. We shudder to think of the probable evil she is spreading, for one such person can corrupt a whole community.

To summarize—these cases give us sufficient evidence of the obvious results when the defective girl who is immoral is in the community, and we will all agree that often the evil done is not that which can be seen.

These defectives lie and steal, spread disease and moral evil. They give birth to children, whether legitimate or illegitimate, who are apt to be feeble-minded or degenerate. These unfortunate, who are not responsible and are easily led, we are allowing to be a prey to any evil influence.

This would be a dark picture, indeed, were it not for the fact that there is a general awakening to the knowledge that there is a problem of feeble-mindedness. We recognize the necessity of detecting subnormals at an early age and training them accordingly, perhaps in their own homes, until adolescence, and then in a custodial institution. As Dr. Fernald has stated, we are now talking about the best way for protection, education, supervision and segregation of the feeble-minded—a plan that will be for economy, safety and welfare. Schools have established special classes for the backward child, that those of subnormal mentality may be detected at an early age; child-helping agencies are making a threefold diagnosis of their children—social, physical and mental—and some are employing their own psychologists. Still further, agencies have joined together for one common purpose, out of which has been formed a League for Preventive Work, which is now helping by studying feeble-mindedness. By means of concerted action, legislators are realizing the importance of custodial care for the defective, and that in the state schools they may be happy and, to a certain extent, self-supporting. We have a long way yet to go. We are at least approaching the time when the State will save money, otherwise expended on useless reformatory care and future court trials; when the community will be saved from the spread of diseases, and when the propagation of the feeble-minded will be prevented.

Book Reviews.

Pharmacology and Therapeutics for Students and Practitioners of Medicine. By HORATIO C. WOOD, JR., M.D., Professor of Pharmacology and Therapeutics in the University of

Pennsylvania; Second Vice-Chairman of the Committee of Revision of the U. S. Pharmacopeia. Second edition. Philadelphia and London: J. B. Lippincott Company.

The second edition of this valuable work within four years shows the appreciation of the medical profession, which is unquestionably grounded upon its excellence. One of its chief merits is that it has been modified to meet the changes of the United States Pharmacopeia. The author also shows his independence by including remedies which have proved their value to him though not recognized as official by the previous authority mentioned.

The scheme of the work includes, in the first chapter, preliminary considerations, with reference to weights and measures, where, as in other works, an effort is made to unite the old with the new; prescription writing, in which allegiance to the newer method of simplicity has been fully considered; and incompatibles, where general principles are considered rather than a series of drugs which may not be combined with a series of others, thus simplifying this important feature of pharmacology and placing a smaller burden on the memory.

For the remainder of the work, drugs are conveniently classified under their general activity rather than their adaptation to different diseases. For instance, they are grouped under drugs to effect secretion, the nervous system, circulation, alimentary tract, metabolic processes and the causes of disease. This, unquestionably, is the only rational way in which to impress upon physicians the activity of drugs and their intelligent employment. One can but approve the recommendation of cannabis indica as a means of combating pain, particularly, since the campaign by the Government against the indiscriminate use of opiates and cocaine.

An excellent bibliography accompanies every group by which those who desire further information may readily learn where it is to be found. Unfortunately, guided by the Pharmacopeia, the author is compelled to discuss the various preparations of certain well-known metals like iron, arsenic and mercury, whose multiplicity tends to anything but simplicity in the use of drugs. The employment of creasote to stimulate gastric motility, which has been urged by many authors, is not mentioned, although its antiseptic activity in the digestive tract is fully considered. The author's views in regard to the uselessness of the employment of pepsin and pancreatin are fully justified by late experimental investigations.

A final chapter on drugs of minor importance is included, with the biting criticism that they are still retained by the Pharmacopeia out of respect for the practices of the ancients.

On the whole, this work must meet our ideal as a guide both for students and physicians in acquiring a working knowledge of this most troublesome of all branches of modern medicine.

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PHYSICAL SIGNS OF INCIPIENT TUBERCULOSIS.

THE advance in the laboratory methods or aids in the diagnosis of tuberculosis have aided, rather than established, the diagnosis of this disease. In the incipient stages, dependence must still be had on physical signs elicited from the infected organs—the lungs or allied organs, especially the heart. The heart responds objectively more quickly to tubercular infection of the lungs than even the lungs themselves. In health, for example, the aortic second sound is louder than the pulmonic second. In the incipient stage of tuberculosis the conditions are reversed,—the pulmonic second sound is louder than the aortic. While this reversal can be found also in mitral insufficiency and in mitral stenosis, these conditions can easily be ruled out, and then the accentuation of the pulmonic second sound remains almost pathognomonic for incipient pulmonary tuberculosis. Besides, the pulse is always found accelerated at some period

of the day or after some activity. Abrahams noticed that in about 80% of his cases of early tuberculosis, the pulse was obliterated on the affected side when the arm was raised above the head. This condition was not found in advanced cases.

Inspection of the chest wall anteriorly reveals the fact that normally the right apex expands more than the left, and if the expansion of both sides is equal, suspicion may be directed toward the right apex. But actual retractions of the supra- or infraclavicular spaces is a sign of advanced disease, and not of incipient. In any event, however, it is unilateral retraction that is significant because bilateral incipient pulmonary tuberculosis is rather rare. The same relative significance must be accorded to fremitus. Fremitus in the right apex is normally better than in the left; equality points to disease in the left apex.

The significance of the percussion sounds is not absolute. It varies according to location. In certain parts dulness may be as normal as resonance in other parts. But in determining the kind of resonance, it is pitch and duration that count, but particularly the latter. Long duration means resonance, short duration means infiltration, while no duration means consolidation. But vesicular resonance is found normally below the left clavicle, below the second right interspace, in the axillary spaces, and over the lower ribs. Dulness is normal over the right apex, in the second right interspace—especially the outer half, the intrascapular space, between the seventh cervical and the fourth or fifth dorsal vertebrae, and over the deep area of the heart. Flatness is normal over the scapulae and the superficial areas of the heart. If, then, the left apex is as dull as the right, there is infiltration of the left; and infiltration of the right apex ought to give a dull-flat (Abrahams) sound. The crucial test of apical non-infiltration is the change from the dulness to vesicular resonance on deep inspiration. If there is infiltration, there will be no such change.

Normal auscultatory—vesicular—sounds are found in the left apex and below the left clavicle down to the base of the heart, in the axillary regions, over the lower lobes, and below the right clavicle. Broncho-vesicular breathing is heard over the right apex, in the second interspace close to the sternum, and in the intrascapular space. Broncho-vesicular breathing follows the lines of normal dulness. Bronchial breathing is

not found over normal lung tissue; it is heard over trachea and larynx, and may be used for comparison. Vesicular breathing has a long inspiratory murmur and a short expiratory. In broncho-vesicular there is an equal length of both, but the pitch is higher. Tubular or bronchial breathing is characterized by very long expiratory murmur and high pitch, but, of course, this form of breathing is not to be found in incipient tuberculosis. The changes from normal to pathological lung by auscultation are progressive—from vesicular to broncho-vesicular to tubular. In the left apex the normal vesicular changes to broncho-vesicular, but in the right apex the prolonged expiratory murmur denotes advanced process. The spoken and whispered voices are more distinct as the cases progress away from vesicular breathing.

These masses of signs are mere guides. They must be marshalled and interpreted. It is the interpretation of the signs found on examination, perhaps much more than the mere discovery of them by the senses of an able examiner, that helps make the proper diagnosis. In tuberculosis it is proper diagnosis that saves life. It is a therapeutic measure of first importance, whether for the individual himself, for any unit of which he may be a member, or for society at large.

MEDICAL NOTES.

GOVERNMENT SURGEON AT COLUMBIA, S. C.—Surgeon French Simpson, U. S. Public Health Service, has been sent to Columbia, S.C., to take charge of the campaign against malaria.

WAR NOTES.

WAR RELIEF FUNDS.—On Sept. 30 the totals of the principal New England war relief funds reached the following amounts:

Armenian Fund	\$232,375.74
Serbian Fund	124,207.42
Surgical Dressings Fund	123,445.85
French Orphanage Fund	121,976.06
Polish Fund	85,985.73
Metropolitan Red Cross Fund	80,673.34

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending September 22, 1917, the number of deaths reported was 248, against 229 last year, with a rate of 16.74, against 15.70 last year. There were 44 deaths under one year of age, against 51 last year.

The number of cases of principal reportable diseases were: diphtheria, 72; scarlet fever, 15; measles, 22; whooping cough, 29; typhoid fever, 7; tuberculosis, 56.

Included in the above were the following cases of non-residents: diphtheria, 6; scarlet fever, 4; measles, 4; whooping cough, 1; tuberculosis, 5.

Total deaths from these diseases were: diphtheria, 2; measles, 2; whooping cough, 5; tuberculosis, 22.

The Massachusetts Medical Society.

NOTES TAKEN AT A HEARING BEFORE THE SPECIAL COMMISSION ON SOCIAL INSURANCE AT THE STATE HOUSE, BOSTON, SEPTEMBER 19, 1917.

CHARMAN: We have set the hearing this morning to hear from the employers of labor on the subject of social insurance. If there are any persons present who care to be heard at this time, the Commission will be glad to hear them.

MR. EDWARD B. SAUNDERS of the Simonds Mfg. Co. of Fitchburg, and today representing also the Associated Industries of Massachusetts, an organization numbering over 250 large employers of labor in the State of Massachusetts: I might say by way of introduction that in connection with that association it is my work to maintain a service bureau and accumulate information on social insurance. I am also a member of the National Association of Manufacturers.

Last year we interested ourselves very actively in the subject of social insurance, and at that time many aggressive moves were made to try to get some states, and particularly Massachusetts, to adopt it as part of their programme. This year the business of the war seems to have rather crowded this subject, with many others, into a subordinate place, so that I have not kept quite so close to it as in the years past.

To interpret the mind of the employer is perhaps not easy, because different employers are of different minds; and yet I think it is fair to state, in lieu of the welfare work done in many of our industries, that the employer is friendly to any reasonable proposition which he feels will benefit his employees; and, as an instance, I would cite the welfare work being done, particularly in the aid and benefit societies that are fostered in particular industries, and the newer forms of group insurance that are being taken up here and there and promise to become important in all our larger industries. The general attitude of the employer toward his help is to make the working conditions and social conditions of the factories conducive to the best life of the working people. Take that as a general proposition. As to the particular proposition of health insurance which, we are told, is the next step in social insurance: Those who advocate it have a programme: the first step was workmen's compensation, which has been carried; and while there are those who questioned whether that properly belongs to the social insurance group, they are inclined to think it does. The next step is health insurance; then will follow various types of unemployment, invalidism, maternity and new conditions to be added from time to time.

We feel on the matter of health insurance that it is something that requires more study. We have

very little experience, and such as we have is mainly foreign experience, and from such figures as the fraternal insurance societies and benefit aid societies are able to give us, and, considering that the workmen's compensation insurance, which has been in operation for some years, is not yet fixed but that changes are being made in it continually, it can readily be seen that our experience in health insurance (which is very much less) hardly justifies us to take a new venture until what we have already has assumed more settled conditions. The workmen's compensation insurance is subject to amendment continually. During this present session, the employee was permitted to have his own physician, and the benefits were advanced from \$10 to \$14 a week, and therefore the rates must go up some 20% or more. We have gotten into a system of merit rating, which is a distinct advantage, but all the time we are trying to work out somehow the compensation problem for industrial accidents, and in this state it includes occupational diseases. The transition from occupational diseases to general health insurance does not seem to be a very long step, but yet when it is considered that our experience in occupational diseases is still in a very doubtful condition, it does not seem wise to move on to the next step of the programme until the first step has been more completely worked out.

The scheme for health insurance is to cover the workman and perhaps the entire community; it calls for a panel of physicians. During these war times the physicians are the men who are the most difficult to reach for work of this kind. Many of them are being taken abroad, and I understand that the more talented among the doctors are the ones taken over; this applies more to the doctors than to any other class in the struggle. It consequently looks as though there would be a dearth of physicians in this country. There is a great deal of splendid work being done in the way of research as to the causes and cures of occupational diseases. Our own state hospital is doing some splendid work, and when the representatives of various state commissions went out to that hospital, they were greatly impressed by what they saw. But whatever is being done only shows us how much remains to be done. A measure which calls for a large outlay of money and the services of physicians at a time when both are increasingly difficult to obtain, seems altogether premature. We ought to have experience to know how to handle any insurance matter, and the complications that have grown out of the workmen's compensation have almost all come through lack of experience. With health insurance we have very much less experience and, therefore, the employer feels that we ought to tread softly and be sure we have just the right plan before we try to put it in operation on any large scale. He is very friendly to any research work, etc., but he thinks that before the State really takes decisive action, we ought to be certain that this is the thing to do.

The private insurance companies are helping to accumulate an experience, but not enough as yet to justify us in adopting this as a wholesale measure in our State.

The chief criticism that I have heard made against health insurance is that it is on paper. The men advocating it are all men whose intentions are the very best. They sincerely desire to help the working people and the community, but theirs are theories without very much support as yet from the facts, and so we ask that we may go on gathering

such experience as is possible, and wait until these experiments justify the adoption of some larger programme, if that day ever comes; for there are a good many who doubt whether the State ought to go into the insurance business; whether it is not something for private enterprise rather than a State measure. There are a good many who question whether too much power ought to be centralized in the State. The experience of the war offsets the experience of insurance there.

Certainly at this time, when we all are making sacrifices and forgetting our selfish interests as far as possible to give ourselves to the Government, we ought not to have this increased tax for putting forward a plan which means a large expenditure with no guarantee that it will accomplish what is proposed.

That covers, in general, what seems to be the attitude of the employers towards this question.

CHAIRMAN: How many of these 250 employers you represent maintain now a system of mutual benefit association in their concerns?

Ans.: I am not able to give exact figures, but very many of them do. The Simonds Mfg. Co. has an aid and benefit association in which the majority of the employees are enrolled. They get sick benefits, a small death benefit, and they can borrow sums of money from this fund to tide them over financial stress. We employ a nurse and a doctor whose services are free to them. Our plant is typical of a number.

Some of the Western industries are more advanced than our Eastern ones, but many of the companies here have large hospitals, etc. For example, the Fore River Ship Building Co. examine their employees to help them (not to reject them); they have emergency rooms and hospitals; everything to foster the health of the employees.

It ought to be said that the employer recognizes that health is a very essential part of the efficiency movement. I wish to emphasize that. People who have efficiency matters in charge, look closely to the health of the workers.

MR. GREENWOOD: Does your firm in Fitchburg contribute to this benefit association?

Ans.: We contribute 20%. We try to make it as self-supporting as possible, but in order to bring the rates down where we want to have them, the firm puts that money in.

MR. GREENWOOD: Would it be possible to find out how much welfare work is being done by your association? That and group insurance! How extensive is it among the members of your association?

Ans.: Group insurance covers members of the whole plant. It is comparatively new.

MR. GREENWOOD: What about the merit system you spoke of?

Ans.: The merit system is something which has been fairly well worked out with the Rating and Inspection Board, with the permission of the Insurance Commission. It provides that a firm doing certain safety work and welfare work is entitled to credit. A firm which has a safety committee will get a credit of 6%. For every measure that the employer takes to prevent accidents, he gets a credit. It has been coming about rather gradually, but now is the accepted policy of the insurance companies, all of which belong to this Rating and Prevention Board.

The employment of a nurse counts as a credit and tends to reduce the insurance premium.

CHAIRMAN: How much do the men have to pay?

Ans.: It is a graduated scale according to how much the man receives. A man who received \$15 a week has to pay 90 cents a month. Fifteen dollars is the largest benefit we pay. [The firm has a welfare book.]

MR. WASHBURN: What is the Associated Industries of Massachusetts.

Ans.: It is an organization of employers. It is for constructive rather than defensive work. I would like to have that point made very clear. We are not an organization to fight anything, but to study ways and means to improve the industries and to secure the personal and active co-operation of the employers themselves. We have no paid attorney or counsel. We have an office in the Kimball Building. There are two lawyers there but they are not employed as lawyers; one is the general manager, and the other the secretary. Their functions are not legal but executive.

MR. WASHBURN: Do you anticipate taking any action in the way of watching legislation in the next legislature?

Ans.: We shall certainly try to keep track of what legislation will affect the employer.

MR. WASHBURN: Did you appear before this Commission last year?

Ans.: I consulted with Mr. Wright and I appeared before several other commissions, but I think not before this one. I centered most of my efforts on the Workmen's Compensation Act. [His views now are practically the same as when he appeared before the legislative committees, but feels very strongly that the war ought to make us cautious about entering any expensive legislation.]

MR. WASHBURN: Don't you think the manufacturer can stand for more study of this proposition than the needy employee?

Ans.: I do not. The manufacturer is more likely to study the question, or delegate some one to study it for him. The needy employee is not so needy as last year because any one can find employment if he has any health whatever. If he stands on the street corner somebody will try to hire him. Last year it was not so easy to find work.

MR. WASHBURN: You say that your organization is a constructive organization, and yet you haven't given us a helpful suggestion in drawing up a bill.

Ans.: I have tried to show that constructive work is being done by the employers and, therefore, a legislative bill is premature at this time. There wasn't a bill last year that was acceptable to all concerned. The one bill that was pushed the hardest was that the employee should pay two-fifths, the employers two-fifths and the State one-fifth. Those who speak for organized labor do not want to contribute two-fifths.

MR. GREENWOOD: Would your association protest against the State paying it all?

Ans.: I think the association would feel that the State is not ready to go into the insurance business. We have not a State fund and the insurance company who was to handle it for the State has changed

its name and become an entirely private company. That is as near a guide as anything we have to health insurance.

MR. BROGNA: When was the Associated Industries organized?

Ans.: It is only about two years old.

MR. BROGNA: Can you point to any of the amendments passed which were endorsed and supported by this association?

Ans.: We have endorsed a number that were not passed. I think that this fall I shall attempt to initiate one on self-insurance because the large companies feel that they can do their insurance better and cheaper than they can farm it out to others. We have not opposed with any strong opposition the amendments that have been passed. For instance, we were willing the employee should have his own physician; and we didn't oppose the increase in any organized way. We have appeared not in opposition so much as in explanation, as I am doing this morning. The employer feels that both sides ought to be considered.

MR. BROGNA: The argument was that the Massachusetts industries could not stand the increase if increased from ten dollars to fifteen dollars—that the rates would jump and be prohibitive.

Ans.: They have jumped, on account of this increase in benefits; it was proposed to jump the rates some 40%; they went up according to scale. The merit rating is helping to alleviate this just a little. At the same time, there are a great many employers who feel that the rates are getting so high that they better not elect to come under the law at all. This was seriously considered last year. I don't like to have it called opposition, but if we didn't come and state our views, you might ask us later, "Well, why didn't you come before us when we were studying the subject?" I am not opposing health insurance now in any antagonistic way. If the mass wants to saddle itself with that expense—from \$2,000,000 up—and feels that the time is right, I suppose the employers will try to get along as they have under the other increases, but the bill will enter into the high cost of living.

MR. BROGNA: How long do you suppose it will take the manufacturers of Massachusetts to gather a sufficient experience at the rate they are going now so that we shall know whether we should adopt some insurance or forget it? What are they doing systematically? Unless something systematic is being done, how are we to find out whether we should have insurance unless we do make a bill?

Ans.: In a few days I could get a list of the employers who are doing this kind of welfare work; I intend to compile one, but it takes time to find out. You can't find out by correspondence; you have to depend upon personal visitations to see what is being done in these various industries.

MR. GREENWOOD: It is very important to get that information as far as you can, and how it is operating. You say that, because of lack of evidence, your association feels that it is not time to put a wholesale scheme into operation.

Ans.: I haven't called for a formal expression of opinion.

MR. GREENWOOD: Oughtn't you to get as far as possible some sort of a definite feeling along that line so you could give us a fair statement of how your organization feels?

Ans.: I could send out a questionnaire, but my experience is that they don't always give you what you want. They often fail to answer the most important part of it.

MR. GREENWOOD: We can imagine that they are not looking for increased expense unless it can be shown to them that there is a benefit to them in it. That is a fair proposition. He wants some benefit if he is to have an increased expense.

Ans.: It is only within a recent period that manufacturing plants have been willing to give information about what they are doing. Now they seem to respond very readily, and I think if we had sufficient time we could get quite a little of their individual experience together.

CHAIRMAN: If I understood you correctly, you said that the experience in some foreign countries did not bear out the experience since the war. Did you refer to any particular country or were you taking the proposition in general?

Ans.: I was taking it in general and Germany in particular, where it was cited that everything was perfection along these lines; but now it seems to be evident that it was an effort to get a centralized power and better soldiery, and perhaps to soothe certain social democrats, who in that country would seem likely to revolt at any time. It was sort of a sop thrown to those who might want to change of a form of government.

[Mr. Saunders was told they would not need the information desired until the middle of November.]

MR. A. LEVE, President of the New England Waist Co.: I was asked to come here and I might state that I am in favor of some form of insurance. While we don't employ thousands of hands, we employ quite a few, but that doesn't influence me. I have worked myself, and the tendency of any working man or woman is not to go to see a doctor until it is too late, and the reason is that the charges are too high and they don't want to pay the money; and when they go, they generally go to the cheapest doctor they can find. I will just tell you of one case: A man had been going to a doctor for months; the doctor said he had diabetes. I have studied a little myself, and I said, "You haven't diabetes. What have you been paying?" He said he had paid a dollar a week; had been to see the doctor once a week. I said, "You go to the Massachusetts General Hospital and be examined." Knowing the man, I sent another man with him, and the report came back that he had no diabetes but simply falling of the arches. That's one of many cases.

My experience in health insurance is that the employers are against it, the workingman is against it, and the doctors are against it. After it has been established, they are all in favor and satisfied. It is so with all new things. I don't suppose you gentlemen want to go into it helter-skelter, but the sooner we have it, the better the state of Massachusetts will be. Health insurance benefits not only the workingman but the whole community. It is a sort of preventive of disease if handled properly. What the workingman wants is a chance to go to the best physicians without having to worry that it will cost more than he can earn.

MR. GREENWOOD: Who do you think ought to pay the bill?

Ans.: I would be willing to stand one-third, the workingman one-third, and the State one-third.

MR. GREENWOOD: Do you think the workingman will stand for it?

Ans.: At first he will object.

MR. GREENWOOD: What chance has it if we make a bill and the workingmen, the doctors and the employers are against us?

Ans.: You can say that in every country they have had the same experience, but after the law has been introduced the workingman has liked it. You hear that the doctors would lose money, but they would make more money. They could give their services for a lower fee because they would have more patients.

MR. GREENWOOD: Has it prolonged life?

Ans.: That I can't say, but the records say,—and I know it is a fact, for I have worked side by side with these people,—that after they knew they could go to the best physicians in town, they went immediately when they weren't feeling right, and in most of the cases the doctor could prevent serious illness. You would have to guard against those who said they didn't feel well and stayed at home in order to draw half pay.

CHAIRMAN: Do you believe in a compulsory form? If so, compulsory on whom?

Ans.: You might have to make it compulsory on some, but is that constitutional? I am not a lawyer and do not know. I don't see any objection to it; I would be willing to abide by it.

SENATOR BROWN: Where is your industry located? etc.

Ans.: In Revere. We have no system of mutual benefits. We employ about 50 men and perhaps 75 women, and have been in business quite a few years.

COMMISSION: Do you belong to the Associated Industries of Massachusetts?

Ans.: I do not; have not considered joining it.

MR. COLLINS: If you couldn't get the whole thing at one time, do you think a preventive system would be the first thing to try; that is, a physical examination by competent doctors?

Ans.: Anything to make a start is better than nothing because it will help the workingman and woman as a whole.

MR. COLLINS: Do you think they would take kindly to a physical examination?

Ans.: No, I don't think so. It has been the experience in the past that they were against it at first, but after it had been introduced, they would not go back to the old conditions; and I have intimate experience with the conditions in Italy, France and Germany, and I know they all want it and like it there. Only in recent years has it been introduced into England. Lloyd George introduced it two or three years ago and it has had to go through its infantile diseases and trouble like any other country.

SENATOR WASHBURN: What kind of pay do the men get who work for you?

Ans.: They are all common laboring men, lumpers; unskilled labor, largely, and men who are not too much educated.

CHAIRMAN: What percentage is sick in a month now?

Ans.: I couldn't figure it out. If one gets sick I send him to the Massachusetts General Hospital and have him examined by good doctors. They are in favor of going to a good man. At the Massachusetts General Hospital they get as fine treatment as anywhere. There are a good many doctors who don't make too much, and if they get hold of a man they will hold him as long as possible.

SENATOR WASHBURN: Do you think it tends toward health or disability to bring the community into close communion with the medical fraternity? Don't you think it is disadvantageous to get a man to lean on a doctor?

Ans.: It will work itself out because they will get too much to do and will send the man away.

MR. GREENWOOD: Are your men largely married?

Ans.: Yes.

MR. GREENWOOD: Number of children?

Ans.: Yes, chances are.

MR. GREENWOOD: Are they receiving compensation enough now so that if this extra expense were put on them it would seriously affect them?

Ans.: No, I don't think it would matter much. Every one has doctors' expenses now that would amount to more than he would have to pay toward insurance.

SENATOR BROWN: When your men are sick, do you rush them to the Massachusetts General Hospital or to a private physician?

Ans.: We have a private physician who is called immediately, but we have a sort of understanding with him that if a case is beyond him, we want him to say so and we send the man to the hospital.

SENATOR BROWN: You send lots of cases to the Massachusetts General? They don't make any charge, do they?

Ans.: They don't make any charge for working-men as far as I know.

MR. GREENWOOD: If the manufacturers should go into the proposition pretty generally, where would the Massachusetts General Hospital be? You would have to establish hospitals and infirmaries all over the state.

Ans.: That would be the best investment any state ever made.

MR. GREENWOOD: We should need to make these so people could go at a reasonable expense. You send your men as a starter.

Ans.: That will come in its course automatically. To start that way would be something like turning the handle around. We have plenty of physicians that could be nominated as consulting physicians at a nominal charge to the insurance companies, and as the matter develops, no doubt the health insurance company or the state would be forced to establish infirmaries, if not established already.

SENATOR WASHBURN: What do you think of a form of insurance that would be compulsory on the state and on the employer but voluntary on the employee?

Ans.: It won't work.

SENATOR WASHBURN: What would you say to the legislative proposition?

Ans.: There is never anything worth while started and pushed without having some Waterloo to it. If it is worth while to start it, it is worth while to push it. It may not succeed the first time, but I firmly believe that if we don't introduce it early the other states will do it and we shall follow in the long run.

MR. GREENWOOD: You have been in Germany? Mr. Gerard says the workers in the cities are hard workers and work longer and get less out of life than any other workers in the world. The laws that were supposed to benefit them bind them as closely to the soil as were the serfs in the times of feudalism. How do you reconcile that with your statement that it was a success in Germany?

Ans.: He probably knows more about it than I do. I want the workingman to be benefited and have the same chances to see the best physicians that the other people do.

MR. LEVE'S COMPANY: Our physician in its employ as it would not pay. They do not require physical examination.

REP. EMERY: Organized labor is opposed to physical examination?

Ans.: I would be opposed myself if I were a workingman. It is delving a little too far into a man's private life. I don't think it would be necessary in adopting public health insurance.

MR. E. W. BURNSTEAD: of the Massachusetts Civic Alliance, which is composed of private citizens throughout the state: I represent an organization that has been represented by its officers here in the State House a good many times on various matters that our directors felt affected the public welfare, and it is from that position that I wish to address you this morning. I might also say that I have received this week from New York a resolution that was passed by the New York Chamber of Commerce this last February, which I should like to present to your organization. That resolution was against health insurance bill No. 69 which was presented in the New York Legislature this year and is substantially like the bill which was presented in this Legislature.

I should like to address my remarks to the injustice of compulsory state contributory health insurance. In order to learn about this subject, we have to go outside the United States. We have to go to the nine countries of Europe which have adopted it, but we meet certain difficulties. For example, the only country that has the system of state compulsory insurance is a country that has had it only three and a half years, and three of those years have been abnormal years, so we do not have very much to lean on in that country. In the Balkan States it is on paper only. Russia is in the throes of a revolution and we cannot get inspiration there. And Germany does not have a contributory system of the state; so we do not have a very good basis to go on. To do the best we can with such evidence as is available, I think you will

agree with me that compulsory insurance by the State is very much like compulsory taxation by the State. Take, for instance, in Germany. In the course of these years \$110,000,000 have been spent by Germany in sanatoria, hospitals, convalescent homes, etc. Others have been built by direct taxation. These have not had a mark put in by direct taxation, but from the employers of labor three-fifths, and the poor employees to the extent of two-fifths. There was a little from voluntarily insured people earning up to \$900. Most of the money to build these institutions came from the workmen—and the poorest kind of workmen—and from the servants, who are not really in the class of workmen. And the workmen have received an average of about \$1.50 a day in return. I think compulsory insurance of that sort is very much like taxation, and taxing the very poorest of the people. It ought to be done, but on a general tax levy. It is the outcome of what is called state socialism in Germany. Bismarck promised the democrats something in the way of social insurance and spent ten years in evolving this magnificent scheme, and when he got it done, they had what they called "state socialism." It is described in a book on the policy of Bismarck as "increased interference of the State in the private affairs of the individual." It goes a step further than compulsory schooling. As Bismarck saw, it relieved the State of the cost of building these institutions and the millions released were used to build up imperialism, and he saw the gradual making of a better and stronger army. Free America ought not to adopt a system that has such an autocracy for its parent.

As to England, where it was introduced by Lloyd George only a few years ago, Dr. William A. Brand makes the charge that when the National Insurance Act was adopted it was assumed rather than proved that it was for the benefit of the working classes. There was no adequate inquiry as to the effects national insurance had accomplished in other countries; if there had been, they would have been less sanguine. Dr. Brand says: "And the mere fact that Germany has national insurance was apparently considered sufficient reason for us to follow."

One injustice of this scheme is that it is presented by an organization in New York, which has a committee on social insurance, and not one member of that New York social insurance committee is a workingman; further, there is not an employer on that committee, nor is there an attorney working for the business interests. How can a committee so made up of academic minds make laws that will put millions of dollars into business and take it from the pay envelopes of the workingmen, and do it fairly and justly?

There is another injustice. It is unjust to employers to be required to pay bills which are caused by lack of care on the part of employees, resulting in bad housing conditions or excursions into various kinds of folly which they have a right to enter upon. Is it just to make the employer pay because of sickness resulting from such causes? Is it just to make the decent worker likewise pay for the sickness of such a worker at his side? And is it right to make the State pay for a class?

The New York Commission went into the subject thoroughly and have compiled the best book on it to date.

Another important matter is that it has never been put on people who had a written constitution.

Lloyd George had no bill of rights standing in his way when he imported it from Germany, and I think today he would change his mind. Bismarck had no such constitution as that now being amended in this state, to block him. Should we surrender these rights of our citizens—the right to be secure in his own income and to do the best for his home and family? President Harrison said that "America exceeds other nations because it is a nation of homes." One of the most beautiful features of our home life in New England is the family physician, selected by the family, paid by the head of the family, and with the confidence of all in the home; his coming and going has been as beautiful a part of the home life as that of the pastor. I am told that in England the National Insurance Act has practically driven the practising family physician out of practice, and that, I call to your attention, is a very serious thing.

Will it be better to have forced examinations? Will it improve morals? Will it be better to have bribery and corruption, which we are told occur in Germany?

There are 33,000,000 wage-earners in the United States and the cost of this elaborate system would be enormous, and it would not be a decreasing cost. In Austria in 1890 the cost per year for each member was \$2.00; it has risen to \$4.67—an increase of 76% in caring for each member. In Germany the cost has been a rising one (24%).

There is another thing that should be taken in forethought in this matter. It is very important to have improvements going on in the way of prevention. Are we going to have these encouraged? They are a burden on taxpayers. If you are going to start this plan by an immense taxation you will discourage improvements that have for their object the prevention of disease and improvement of health.

It is essential to keep the government as simple as possible—the simplest is the best. This will put the expense of various bureaus, clerks, commissioners and inspectors onto the government. Dr. Frederick Friedburg spent twenty years in the Imperial Insurance office, and he draws attention to this fact. Pause and think twice before the state takes on a compulsory payroll.

Finally, with all the boasting regarding this scheme, it is not doing as much in Europe for the people as our people are doing here in the parks, playgrounds, etc., all costing millions of dollars; and all contribute more to the relief of the masses than health insurance ever could contribute, according to the views of its advocates. The reason is that it does not do what it claims to do. It has been a disappointment to the well-wishers of humanity. Of 100 persons insured in 1891, 35 were sick; in 1901, it had risen to 38; and in 1911, to 43—a continual increase in sickness of insured people of Germany.* The average number of days lost is important. Increasing from 5.89 days lost in 1885, to 8.49 days lost in 1912. Again, the average length of disability increased from 16 days to 19 days in Germany. So that we see the entire scheme is hopeless from the evidence that can be obtained.

To sum up and remind you of the various points: It is unjust to taxpayers, to employees and to employers; it invades the sacred rights of the indi-

* From page 54 of the New York pamphlet on Health Insurance published by the Chamber of Commerce.

vidual; it leads to corruption of the medical profession; it would cumber our democracy with bureaucracies; it will tend to increase the payroll; will increase sickness days, and all this where we have trade unions, etc., without number—more than in any other land on the face of the globe—leaving practically none of our industrial workers in need of insurance against sickness.

SEN. BROWN: You are against health insurance because it would tend to increase taxes?

Ans.: I am against health insurance for the reason stated, and because it does not begin at the right end—prevention is better than cure.

MR. GREENWOOD: You would be in favor of a preventive proposition to a certain extent perhaps?

Ans.: I think that is the constructive view to take. I think anything you can do to develop ambition and energy along that line will be valuable.

The Chamber of Commerce of New York has another clause: Resolved: That this Chamber favors the creation of a commission, to include representatives of capital and labor, physicians, economists, lawyers, actuaries, social workers, etc. The duties shall be to investigate the condition of employees in the various trades, the living wage, conditions under which they live, etc., to ascertain what the cost may be if divided equally between the employer and employee, and what the cost to the state will be if it assumes the entire expense of supervision and administration.

NOTES FROM THE DISTRICT SOCIETIES.

DISTRICT CORRESPONDENTS.

Berkshire. A. P. MERRILL, M.D., Pittsfield.
Bristol North. ARTHUR R. CRANDELL, M.D., Taunton.
Bristol South. EDWIN D. GARDNER, M.D., New Bedford.
Essex North. T. N. STONE, M.D., Haverhill.
Essex South. H. P. BENNETT, M.D., Lynn.
Hampden. LAURENCE D. CHAPIN, M.D., Springfield.
Hampshire. E. E. THOMAS, M.D., Northampton.

NOTICE TO APPLICANTS FOR FELLOWSHIP.

The next examinations for candidates for fellowship in the Massachusetts Medical Society will be held by the censors in the eighteen districts of the state on Thursday, November 1, 1917. The date of the examination was changed when Chapter V of the By-Laws was amended at the annual meeting of the Society, June 13, 1917.

Applicants for fellowship should apply at least a week before the examination to the secretary of the district in which they have a legal residence, taking with them their diplomas in medicine. If non-residents of Massachusetts, they apply to the Secretary of the Suffolk District.

WALTER L. BURRAGE, M.D., *Secretary.*

BERKSHIRE DISTRICT MEDICAL SOCIETY.—The House of Mercy Hospital at Pittsfield, Mass., has concluded a contract with the city for furnishing care for the cases of contagious disease in the city. The hospital will furnish a separate building for this purpose.

The cities and towns of Berkshire County have furnished the men, officers and funds for a complete ambulance unit. After considerable

training here this unit was drafted into the army and sent to Camp Devens. The officers include Capt. R. J. Carpenter from North Adams, Lieut. Harry Tate, Lieut. Thomas Littlewood and Lieut. M. H. Walker from Pittsfield.

Among the men of Pittsfield now in active service in the Army Medical Department are Capt. I. S. F. Dodd, and the following as lieutenants: Harry Tate, John Sullivan, M. H. Walker, Jr., Thomas Littlewood, H. A. Schneider, W. J. Lally. A. P. MERRILL, *Reporter.*

Miscellany.

NOTICES.

BOSTON MEDICAL LIBRARY.—The Boston Medical Library is trying to make a collection of medical literature of all kinds relating to the war. Contributions of books, pamphlets, newspaper clippings, pictures, broadsides, notices—in fact, anything having a bearing on the medical aspect of the war, will be gratefully received.

JOHN W. FARLOW, *Librarian.*

BOSTON ORTHOPEDIC CLUB.—Under the auspices of the Boston Orthopedic Club, there will be held a meeting at the Boston Medical Library on Saturday night, October 6, at 8 P.M. Dr. E. G. Brackett, who is the Director of Orthopedic Surgery and in charge of all orthopedic work connected with the Army, will talk about the plans that have been made to take care of the orthopedic cases in the present war. To this meeting all members of the medical profession are cordially invited, and we are sure that, when we remember that 40%, at least, of the wounded are classified as orthopedic cases, it will be of great interest to the general profession, as well as to the orthopedist. There will be explained the plans that are made for the reconstruction hospitals that are to be built in this country, as well as the large orthopedic hospitals that are planned to be built in France.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.—The semi-annual meeting of the Society will be held at the McLean Hospital, Waverley, on Wednesday, October 10, at 12.30 o'clock, P.M.

LYMAN S. HAPGOOD, M.D., *Secretary.*

NORFOLK SOUTH DISTRICT MEDICAL SOCIETY.—Meeting for medical improvement at United States Hotel, Boston, Thursday, October 4, 1917, at 11.30 A.M.

Dr. James L. Huntington of Boston, will read a paper on "Certain Causes of Bleeding during Pregnancy; their Significance and Treatment."

For Dr. James H. Cook of Quincy.

Meeting of Censors at office of Dr. F. H. Merriam, South Braintree, Thursday, November 8, at 2 P.M. Candidates should bring diplomas.

F. H. MERRIAM, M.D., *Secretary.*
 South Braintree, Mass.

CONFERENCE OF PRESIDENTS OF EXAMINING BOARDS CALLED TO MEET AT CAMP BEN HARRISON, OCT. 8, 1917.

—A meeting of the officers and members of the various Examining Boards for the Medical Reserve Corps is hereby called at Camp Ben Harrison, Monday, Oct. 8, 1917, at 11 A.M. This conference has the endorsement of the Surgeon General, and already nearly one-half of the Boards have responded favoring the conference at that time. Important subjects will be brought before this conference and a large attendance is solicited.

(Signed) GEO. N. KREIDER, *President,*
Medical Reserve Corps, Examining Board,
Springfield, Illinois.